# ANNUAL REPORT

## OF THE

# ARCHÆOLOGICAL SURVEY OF INDIA

## 1937-38

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## PART I

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EDITED BY

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PUBLISHED BY MANAGER OF PUBLICATIONS, DELHI

PRINTED BY MANAGER, GOVERNMENT OF INDIA PRESS, CALCUTTA

1942

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## OF THE
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FOR THE YEAR

1937-38.

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## PART I.

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### INTRODUCTION.

The belated appearance of this Report is due, in the first place, to the fact that the late Mr. N. G. Majumdar could not send in his contribution on the excavations carried out by him during the year 1937-38. After his regrettable murder in November 1938 it was found that the account of his work at Kosam had to be entrusted to somebody else who had to work on this site. Unfortunately, this took a considerable time, inasmuch as the officer, who was entrusted with the work, could not cope with it and the contribution was consequently delayed.

The format of the consolidated Annual Reports of the Department since 1920-21 has continued unchanged. It was, however, felt that, while much of the routine matter relating to the administration of the Department, which is comparatively of little interest to the public, was printed on costly paper, the scientific part of the Department's work in which more interest is being taken was beyond the means of the larger public owing to the heavy cost of the publication. The advent of the European War emphasised the need for economy, particularly in the matter of imported and costly art paper. With the sanction of the Government of India it was, therefore, decided that the Report should henceforth be published in two parts, one with a simple paper cover containing administrative and routine matters, such as conservation, treasure trove, etc., and the other devoted to exploration, epigraphy and other items of research. While the former part will conform to the size and get-up of most of the Annual Reports of Government Departments, the latter will in future appear in a handier form with adequate illustrations. It is hoped that these changes, which are designed primarily for the benefit of the interested public, will be widely appreciated.

In regard to the administration of Museums under the control of the Department, it may be mentioned that a new policy of distributing as widely as possible duplicate antiquities, has been definitely adopted during the year and sets of antiquities prepared for every important Museum in India.

# SECTION I.—CONSERVATION.

## PUNJAB AND NORTH-WEST FRONTIER PROVINCE.

***By Mr. H. L. Srivastava.***

A sum of Rs. 67,934 was spent on the conservation in the Punjab and North-West Frontier Province including Rs. 8,559 on the maintenance of water supply and pumping plant and Rs. 1,540 on account of Agency Charges to the Public Works Department.

In and around Lahore special Repairs were done to Hazuri Bagh, Jahangir's Tomb, Nur Jahan's Tomb and the Lahore Fort.

At *Hazuri Bagh* the southern and northern façades were repaired and the *Roshanai Gate* near Maharaja Ranjit Singh's Smadh was made tidy and secure on stone pivots embedded in cement concrete.

At *Jahangir's Tomb*, the old and decayed Mughal cause-ways, towards the north and south of the central western tank of the Mausoleum, were dug out and relaid on a damp proof course with special size bricks laid in cement, showing diaper pattern resembling the old on the surface. The dilapidated compound wall of the Mausoleum on its south was restored by brickwork in superior kankar lime. The open and wide joints were well raked and pointed sunk to match the adjoining surface.

The spalled facing stones of the plinth in the eastern gateway of the Tomb were replaced by neatly dressed red sand stone slabs, the new panelling work being similar to the old. The decayed marble slabs in the Chhatri of the north-west minaret were replaced by new polished stones embedded in cement concrete and the loose stones were carefully reset. The open joints of the white marble *chhajja* stones of the minaret were grouted and pointed sunk with white cement. The staircases leading to the roof of the Tomb in all cardinal points were repaired and the loose and bulged out slabs reset in their original position.

The western façade of the Tomb had decayed. The stone slabs containing marble inlay work in geometrical patterns, including the stones in the cornice above had become loose, especially in the southern half. These were replaced by new fine dressed red sandstone slabs with marble inlay pieces. Other slabs which were not totally decayed were made serviceable by chiselling off about ½″, and fresh inlay pieces were provided, similar to the original.

At *Nur Jahan's Tomb*, the construction of the pavement of the pathways resumed from last year was completed on the west, north and south—laid in diaper pattern in cement mortar with new special size bricks enhancing thereby the beauty of the Tomb. The broken brick *jali* ventilator was replaced by a new one. A neat iron railing about 3′ high was provided round the well on the north-east corner of the pathway, as a measure of safety.

At the *Lahore Fort*, the Fort wall was repaired in patches with old country bricks in lime. The work of preparing the lawns and pathways to the south-east of Diwan-i-Am is in progress. The pathways and lawns were demarcated during the year by constructing walls and steps.

Special Repairs to the north-east corner room of the upper storey of *Shish Mahal* mentioned in the last year's report were completed this year.

In Kangra District, Special Repairs were executed to the Rock-cut temple at Masrur, Basheshwar Mahadeo Temple at Bajaura, Temples at Dassal and

Jagat Sukh, Kangra Fort and the Baijnath Temple. The work at the last two places is in progress.

The *Masrur Temple* was cleared of all jungle and rubbish, open fissures were grouted with liquid cement, the Sikhara was rendered secure by fastening copper clamps all round and consolidating cement concrete over the exposed decayed structure. The back of the main shrine was rendered water-tight.

Cracks and open joints appearing in the *Basheshwar Mahadeo Temple* were cement grouted. The top of the Sikhara was rendered water-tight by the consolidation of cement concrete. The Temple was surrounded by a barbed wire fencing.

The top of the Sikhara of the *Temple at Dassal* was rendered water-tight by the consolidation of cement concrete and joints, which had hollowed out due to the decay of mortar, were grouted with suitable tinted cement mortar.

The pavement around the *Temple at Jagat Sukh* was reset in cement mortar. Some of the open joints were filled with coloured cement and glass tell-tales were fixed on various joints to detect any further movement.

The back wall of the Jahangiri Gateway as well as the walls of the Hammams in the *Kangra Fort* were underpinned and repaired with stones matching with the adjacent surface.

The *Kangra Fort* was occupied by Mahmud of Ghazni in A.D. 1009. Mohammad Tughlak in 1337, Feroze Shah in 1351 and Jahangir in 1621. With the decline of the Mughal supremacy the Fort reverted to Katoch Rajas who claim descent from the ancient rulers of Trigarta. Raja Sansar Chand II tried to set the Fort in order in 1786, but he came in conflict with Maharaja Ranjit Singh and was compelled to yield in 1809. The Sikhs remained in possession of the Fort till 1847 when it passed under the control of the British Government. With these successive changes, most of the buildings lost their authenticity.

The old broken and decayed pavements in the *Baijnath Temple* were dug up and loose debris thrown away. The floor was rammed and cement concrete consolidated all over, before flag stones were set in cement mortar. (Plate II *a.*)

Special Repairs to the *Kabuli Bagh Mosque at Panipat* consisted of restoring the south-west side wall and considerable underpinning of the structure in the south portion. The south-west corner room was also repaired and an expanded metal *jali* was fixed at the south west opening. The top layers of decayed walls were secured against rain-water with masonry in cement mortar, and the roof was made water-tight.

*Hazrat Daud Kirmani's Tomb at Shergarh, District Montgomery*, a privately owned monument, was repaired this year out of the sum of Rs. 3,051 deposited by the owner Pirzada Muhammad Husain Sajjada Nashin of the Tomb.

Annual Repairs in the *Lahore Fort* consisted chiefly of repairing and reconditioning the Diwan-i-Am in connection with the Viceregal Durbar which was held on the 23rd October 1937, at 11 A.M. The interior walls and arches had a cream colour wash. Wooden beams and rafters were cleaned with linseed oil and the top of the roof was made water-tight. Some decayed masonry in the northern wall was underpinned; the broken floors of the building behind the Takht and balconies were relaid; the decayed red sandstone *dasa* under the stone pillars was dismantled and replaced by a new one. Modern brick steps were built to the south of the platform to provide entry for the Viceregal Party. In *Shish Mahal* the floor of the main hall was paved with red sandstone.

At *Shalamar Garden* the Viceregal Party was held on the evening of the 23rd October, 1937, and in preparation for this, the monument received special attention. The broken geometrical patterns in the wooden ceilings of the central pavilion in the 1st terrace and those in the 2nd terrace were restored and painted similar to the original ; the channels and tanks in the 1st and 2nd terraces were cleaned of silt and the big white marble Abshawar stone and *jalis*, fountain heads and Takht in front, the numerous niches of the Sawan Bhadon pavilions as well as the pillars of the arcade and the red sandstone of the side walls of the staircases leading down to the 2nd terrace were satisfactorily cleaned. The decayed red sandstone of the staircases was replaced and the open joints of the stones were treated with coloured cement mortar. The buildings were washed with cream colour. The brick pavement of the pathways in the eastern half of the 2nd terrace that had almost decayed and became uneven was relaid in original patterns with special size bricks laid in cement mortar over a damp proof course.

At *Maharaja Sher Singh's Smadh and Baradari* the roof of one of the rooms of the Baradari fell down, as the *kail* wood beams were eaten away by white ants. This roof as well as the smaller one in the north was dismantled and re-roofed with deodar wood beams, rafters and planks.

The worn out and missing patches of fine masonry in the entrance gates to Jahangir's tomb and *Akbari Sarai* were repaired. One and a half inch thick Badal stone flooring was laid in cement mortar on the south plinth of the main tomb.

The repairs to the decayed masonry of the cells of the *Akbari Sarai* on the north-west side were extended this year from Rooms Nos. 18 to 34. A few patch repairs were done at the entrance and north gates of *Akbari Sarai* and *Asaf Khan's Tomb* with bricks in kankar lime.

At *Harappa* lime concrete was consolidated on an apron in front of the Museum.

The Special Repairs executed by the Public Works Department were (1) "Improvement to working of fountains at the Shalamar Garden", (2) Providing and fixing 3″ 1/d kent venturi meter on the rising main of the oil engine driven Pumping Plant at Shalamar.

## Gardens.

The report on the gardens attached to the protected monuments is given below :—

*Shalamar Garden.*—A section of the rose plots on the west side of the tank was trenched and regrassed and three of the rose beds replanted with new roses. In the beds round the tank Aster and Balsam made a good display in October, November, 1937, and Petunia during March-April, 1938. The shrubberies in the third terrace now well established were at their best during February-March, 1938.

Their Excellencies the Viceroy and Vicerine of India visited the Gardens in connection with the party arranged in their honour on the 23rd October, 1937.

The Chiragan Fair was held on the 26th and 27th March, 1938. Some control over this fair has been made possible by restricting the erection of stalls to the uppermost terrace, a step which had appreciably reduced the damage. On the first Monday of every month the garden was reserved for Pardah parties.

*Shahdara Gardens.*—The gardens were maintained at their usual high standard throughout the year. At *Nur Jahan's Tomb* the old Cypress trees, which

surrounded the Tomb, were removed and young trees planted, while at Raj Ghat the trenching and regrassing of the grass plots is at present being taken in hand.

The *Chitti Baoli, Attock District* is ancient, well situated on the Grand Trunk road, was transferred to this Department from the Public Works Department in 1928. It has been cleaned for the first time and yields ample water to the camping ground nearby.

The programme of conservation work done at *Taxila* during the year 1937-38 embraced repairs to the *Kunala Stupa and monastery, the main Stupa at Mohra Moradu* and the *monastic area of the Dharmarajika Stūpa.* The *Kunala Stūpa* situated in a prominent position commanding a view of the city of Sirkap was taken in hand for special conservation. On the east, west and south the exterior walls of the stupa were repaired, but no attempt was made to restore the lost *kanjur* mouldings. The dilapidated walls of the monastery were repaired, particularly on the north and west. The work was carried out by using the stones which had been collected at the time of the excavation of the monastery, and care was taken that the height of the repaired walls was well below the highest existing level on the east. At the monastery attached to the Dharmarajika Stūpa walls of the later monastery, which stood on the earlier court of cells, were underpinned wherever the foundations were exposed. The south-east corner of the wall of the monastery was repaired, the facing stones being supplied where missing and the bulging walls rebuilt in plumb. The south wall of the Hall of Audience has been repaired and its roof supported, all the material used being old. A large drain with its bed and sides laid in brick and lime masonry was constructed in the south-west corner of the site. All the storm water from the entire site will now be regularly conducted to the *nullah* instead of precipitating on all sides and damaging the fields. Guide boards were supplied at all the sites in the Dharmarajika area.

The shed erected on the site to protect the relief stucco figures on the south of the main Stūpa was dismantled, inasmuch as the group has been removed to the Museum. The core of the Stupa has been filled in with stone in lime masonry, the surface being rendered water-tight.

A gang of labourers is maintained for eight months in the year for the periodical clearance of jungle growth, clearing the drainage channels and putting fresh earth on the tops of the excavated walls.

## NORTH-WEST FRONTIER PROVINCE.

At *Jaulian* the well preserved Stūpas and the numerous stucco figures and figurines are the main attractions. For some time past it has been noticed that these fine figurines especially those of Stūpas Nos. D1 to D5 and A13 to A15 were losing their smooth finish and sometimes also limbs, as a result of the action of rain-water. In order to safeguard the Stūpas from further decay weather boards of plain galvanised iron have been fixed to the roof over them and the collapsed and bulged out north and east walls of the Hall of Assembly together with the jambs of cells Nos. 4, 5, 6 and 7 have been reconstructed in lime mortar. Tops of the cross walls of some cells have been made water-tight by rebuilding their top layers in cement mortar. The top of the dome of the main Stūpa through which rain water percolated has also been rendered water-tight with a layer of lime concrete laid on a damp-proof course of cement concrete. Notice Boards have been provided at different parts of the

monument for the guidance of visitors; and the wood work of the sheds over the Stūpas was coal-tarred. An attempt was made to improve the portion of the approach road over the Nallah by laying six coal tar drums to form a culvert of three outlets, in order to save this portion of the road.

At *Jamalgarhi* the approach road through the hills was repaired and now extend to the base of the hill. The entire area comprising the remains was tidied up.

## UNITED PROVINCES.

***By Khan Bahadur Maulvi Zafar Hasan.***

The works of special repairs to the roofs of the *Imambara of Asaf-ud-Daula at Lucknow* and the ancient *Buddhist ruins at Sarnath*, undertaken during the last year and discussed at some length in the last report, were brought to completion at the total cost of Rs. 29,710 and Rs. 9,443, the amount expended during the year under report being Rs. 16,215 and Rs. 2,436 respectively. The conservation of the *Taj Mahal at Agra* was another project taken in hand last year, and in that connection the two operations, *viz.*, (*a*) the repairs to the underground drains in the courtyards of the mosque and the *Jawab* and (*b*) providing dry pitching round the north-west bastion of the Taj enclosure were brought to completion during the current year. The bastion which stands in the bed of the Jumna had a vertical crack at the junction with the west wall of the enclosure. The crack was filled in with cement, and on the assumption that it was due to the settlement of the foundation, a dry pitching of boulders was attempted round it, but without success. Happily, no further widening of the crack has been observed, but it was decided to protect the bastion against river erosion by fresh pitching of boulders after a proper examination of the foundations. This revealed the existence of a range of brick masonry cylinders, constructed some 7 feet apart with the intervening spaces filled in with brick walls. The cylinders or wells were found in a practically sound state, except a few disturbed courses of the top masonry, projecting beyond the superstructure of the bastion. This was made good before the fresh pitching was laid to a depth of 10 feet from the plinth level. The total cost of the work amounted to Rs. 1,858.

It is interesting to note that in course of digging in the alluvial bed of the river for pitching, 68 coins (one silver, one billon, and 66 copper) were picked up by labourers eight or nine feet deep. They include one issue of Ala-ud-Din Khalji, one of Shah Alam Bahadur Shah, 25 of Shah Alam II and 20 of Akbar Shah II. 14 copper pieces bore only the title of Sahibqiran and they could not be assigned with certainty to any ruler, while the remaining 7 were too corroded for proper identification. The fact that they were picked up at random from time to time at different levels, and included an issue of Ala-ud-Din Khalji and none of Shahjahan or his immediate predecessors, leaves no doubt that they represented stray votive offerings made from time to time at the Jumna and have no relation with the construction of the Taj or any subsequent repairs to it. The coins were duly classified and distributed among different museums according to rules in force for Treasure Trove coins.

The open courtyards in front of the mosque and the *Jawab* in the *Taj Mahal* contain a net-work of underground rain-water drains, which had choked up mostly by the dislodging of the red sandstone slabs forming the sides and beds. The drains were opened and restored to their original condition. The task which

exceeded the estimates owing to much of the work being unseen, was brought to completion at a total cost of Rs. 11,042, the expenditure this year being Rs. 9,175.

*Sun Temple at Katarmal, District Almora.*—Among the new works executed during the year the most important was the special repair to the *Sun Temple at Katarmal*, district Almora. The temple,[1] locally known as *Bara Aditya* lies in a spacious compound paved with stone slabs, and, measuring 160′ by 100′, contains a large number of subsidiary shrines. The main temple, which stands at the west end of the compound, consists of a cella 12′·6″ square internally with a *mandapa* on the east. The cella is surmounted by a *sikhara*, of which all but a portion of the eastern façade is in ruins. The *mandapa*, a later addition with a gabled slate roof, was still worse with its decayed wooden beams and broken side walls. The temple was first visited by the Superintendent, Hindu and Buddhist Monuments, Northern Circle, in the year 1921, when detailed conservation notes on it were drawn up by him. It was not till 1927 that the monument was brought under the control of the Archæological Department and certain minor repairs such as the grouting of the lower portion of the *sikhara* and the rebuilding of the retaining wall surrounding the compound were carried out to it. In the conservation notes referred to above, the *sikhara* being declared past repair was recommended to be dismantled, but such a treatment was considered unnecessary, and an attempt was made to preserve the extant portion. In pursuance of this scheme the debris lying over its ruined portion was removed, the broken masonry was rendered secure by underpinning and filling up holes and open joints with fine cement concrete, and the bulged out facing stones on the east were dismantled and reset. Other items carried out in this connection were the supporting of a cracked stone beam on two rolled steel joists, providing an angle iron frame to prop up the broken lintel of the doorway and the removal of the modern wall which had been erected in the interior of the cella. The roof of the *mandapa* was renewed, and the profusely ornamented wooden door leaves of the cella were refixed in their original position. The work involved an expenditure of Rs. 2,363.

*A domed structure close to Akbar's tomb at Sikandra.*—The conservation of the domed structure to the west of the main entrance to Akbar's tomb at Sikandra known as Akbar's Hathi Khana or elephant stable was another work taken in hand during the year. The building consists of an arched dalan two bays deep, having seven arched openings to the south. Internally, each of the two bays is divided by cross arches into seven compartments which are covered by domes. The building was in a ruined condition. Four of its front archways at the east end had collapsed long ago, when two domes of the adjoining compartments had also fallen in and the other two had been partly damaged. Nothing had been done to preserve the building, except that the two broken domes were supported each on a masonry shoring pillar, and a screen wall was constructed on the site of the fallen arches to hide its dilapidated condition. Four rooms at the west end had been utilized for some time as a police outpost and to adapt them for the purpose their side arches were filled in and the front ones provided with doors. All these modern additions have been removed, and the earth and debris accumulated inside were cleared exposing the original stone pavement most of which is still extant. The broken walls, soffits of the domes, arches and piers have been rebuilt and their open joints treated with recessed pointing. For

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[1] For a description see the Annual Report for the year 1921-22, pp. 50-51.

want of funds further work has been postponed to the next year, when the shattered domes will be supported and roof will be grouted and rendered water-tight. The expenditure incurred on the work during the year amounted to Rs. 1,071.

*Temples at Tallihat and Baijnath, District Almora.*—Certain plots of land were acquired at the groups of temples at Tallihat and Baijnath, district Almora, at a cost of Rs. 267. Four of these temples, *viz.*, the *Satya Narayan, Rakash Deval* and *Laxmi-Narayan at Tallihat* and *Bamni Deva at Baijnath*, were closely surrounded by private fields, and it was not possible to expose their plinths and maintain them in order without land acquisition. A scheme for repairs and improvements to these monuments has been drawn up and will be given effect to in due course.

As usual, structural repairs were carried out to many monuments in connection with their upkeep and maintenance. There are 690 central protected monuments in the United Provinces, of which 105 are mounds or ancient sites, and the remaining 585 comprise buildings and architectural relics. Out of the amount of about Rs. 40,000 annually allotted for ordinary repairs and maintenance of these monuments, more than half is spent on the pay of the establishment employed to look after some of the buildings, and the balance is available for repairs. As it is obviously impossible to attend to the needs of all the monuments every year from this modest budget grant, only the more important monuments receive constant attention and are kept in perfect order, while others are taken up in rotation. The biennial or triennial repairs are, however, substantial enough to render any special attention unnecessary during the period of rotation.

Effective measures were adopted to preserve the mural decoration of the *Shish Mahal* (Glass Palace), one of the most ornate palaces in the Agra Fort. The entire wall surface is here richly ornamented with plaster geometrical patterns and floral designs cut in high relief, with glass inlaid background. The incised plaster is gradually crumbling away and in order to stop further peeling the edges of the existing patches had been treated some time ago with fillets of cement plaster. In restoring the broken patches only the broad outlines, technically called *Ghalibkari*, have been repeated, while no attempt has been made to reproduce the fine carving or to relay the ground with glass. This remedy proved rather ineffective and unsightly, in that the thin plaster was hardly protected by the heavier cement edging and further patches made their appearance. This time the repairs have been done to the plaster with *Gutch* mortar, which will quickly assume the dull mellow shade of the adjoining plaster.

The underground cells under the *Jahangiri Mahal at the Agra Fort* were infested with bats, which found access to them through ventilators and door openings. All the ventilators have been closed with screens of expanded metal fitted in angle iron frames, and the door openings provided with door leaves of the same material, with the result that the cells are now quite free from the bat nuisance and can be visited without any inconvenience.

At the *Taj Mahal* a large number of the paving slabs of the causeways disturbed by the roots of the neighbouring trees were dismantled and reset, and the south-east corner of the Gausala was repaired. The stone platform projecting from the north wall of the Taj into the river bed was cleared of silt, and the ground adjoining it was dressed and levelled. From the lofty terraces of the Taj the picturesque view of the river is much enjoyed by visitors, and it is desirable that the area on that side of the monument should be kept neat and tidy.

*Humayun's mosque at Kachhpura near Agra* was rescued from encroachment by squalid huts, erected in the courtyard and against the walls. The acquisition of these huts proposed in the year 1935-36, and their removal could not be effected till two years later owing to certain technical difficulties. The mosque, which bears an inscription of Humayun, is an interesting example of the early Mughal period. Unfortunately it is in a ruined state; four of the compartments on either side of its central chamber fell down long ago, and the domes of the remaining three were in a dangerous condition. They have now been supported on angle iron, bent according to the curvature of the domes and strengthened by rolled steel Joist uprights. Other urgent repairs are proposed to be undertaken next year. The *mosque of Jafar Khan* in a suburb of Agra a ruined structure which has all but disappeared, had one of its arches which was showing a tendency of bulging out provided with a buttress and a shoring pillar. This is expected to arrest the total destruction of the monument. Another work at Agra was the repair to the northern arch of the *Idgah.* Here a few of the decayed facing stones of the spandrels of the arch which had suddenly fallen down were replaced.

The decorated marble facing of the spandrels of the inner arch of the entrance gateway to *Akbar's tomb at Sikandra* were dismantled and reset. Many of the facing slabs which are inlaid with floral designs in black marble had bulged out dangerously and had to be taken out and relaid, the fractured pieces being renewed. Apart from the high and strong scaffolding required for its execution, the task required special care in dismantling and refixing the ornamental slabs, which were consequently numbered and their position carefully noted before removal. The real cause of mischief was found in the decay of the brick masonry core at the back of the marble veneer, which was made good. The facing slabs laid in lime mortar were further secured with copper clamps and dowels according to the original arrangement. Similar treatment was accorded to a dislodged jamb of the main mausoleum, where also a few dislocated brackets and *jali* panels were dismantled and reset.

The broken *chhajja* slabs of the so-called *Record Office among the Palaces at Fatehpur Sikri* were replaced by new ones, while the dusty floor of the latrines of the Turkish Sultana's Hammam which had been conserved last year was laid with red sandstone slabs. In the same locality a portion of the city wall which fell down at the Ajmere Gate during the rains was rebuilt.

Repairs were carried out to the *Idgah at Sakit, District Etah.* Standing in a ruined fort this building is marked by only a black kankar wall enclosing on the west, north and south the upper part of a double terrace. Bereft of any architectural pretensions the monument derives its interest from three old stone inscriptions built into the west wall. The oldest of these epigraphs goes back to the thirteenth century A.D. being a record of the Slave King Ghiyas-ud-Din Balban, the other two belonging to Sher Shah and Akbar respectively. Curiously enough, each of these refers to the erection of a mosque and has no relation with the Idgah, which is a much later structure, in which the inscriptions which seem to have been found in the locality were preserved. The western wall was so ruined that the slab bearing Balban's inscription was split up into two, while the epigraph of Akbar had fallen down. The west wall has now been reconstructed with all the three inscribed slabs carefully built into it and provided with a dripstone for protection against rain. The rebuilding of the side walls and the erection of a barbed wire fencing round the lower terrace still remainsto be done.

The conservation of the *Sati Burj at Muttra* was taken in hand, and during the year the missing *chhajja* slabs and brackets on the east face were restored. Similar treatment is required at the other façades of the building, which will be attended to in due course. Teakwood doors of Hindu design were provided to the *Jugal Kishor temple at Brindaban, District Muttra,* to replace the wire netted ones which had become unserviceable.

Among the group of *temples at Dudhai, District Jhansi,* necessary repairs were undertaken at the shrine of linga or Mahadeva, Lesser Surang, Akhara and Banbaba. The first three are in an advanced stage of decay and such measures as the removal of debris, the underpinning of the plinth and the resetting of dislodged stones were carried out to them. At the *Banbaba,* which is in a comparatively better state of preservation, the unsightly modern rough stone walls were removed, the south wall of the sanctum which had been partly broken was rebuilt, the paving stones of the floors of the cella and the porch were reset and the area surrounding the shrine was levelled and dressed. The broken portions of the compound wall at the *Jaraika-Math at Barwasagar* was rebuilt and an iron turnstile was erected in the doorway of the enclosure to prevent ingress of cattle. At the *Gupta temple at Deogarh* the modern floor of the sanctum was dug out and stone pavement was laid at the original level, while the heavy stone pedestals in the sanctum were rearranged in their proper position in the centre. The dusty floor of the *Bara Khamba at Kunch, District Jalaun,* was relaid with lime concrete, and the broken patches in the plaster of its dome were made good. In the Almora District improvements were effected to the *group of temples at Katchery,* the *Mirtyunjaya temple at Dwarahat* and *the temple* of the same name *at Jageswar* by paving their floors with stone slabs. *Daulat's tomb at Mehnagar, District Azamgarh, and Iftikhar Khan's tomb at Chunar, District Mirzapur* are other monuments which had their share of attention during the year.

## Gardens.

Owing to the failure of the monsoon in the United Provinces things were exceptionally bad at Agra, which had only one shower in winter. A heavy cyclone in May caused a considerable damage to the archæological gardens uprooting many of the trees. Inspite, however, of these unfavourable conditions, the gardens fared tolerably well. The difficulty for the irrigation of the Taj Garden is constantly increasing. It receives its water supply from an irrigation canal, which is stopped at frequent intervals to meet the growing demand for sugar-cane cultivation. A scheme for a tube well was considered but, though meant only to be subsidiary to the canal water supply, it involved large initial and recurring expenditures and had to be abandoned. Experience, however, shows that the canal water supply cannot in future be depended upon for the proper maintenance of the Taj Garden, and a supplementary arrangement for the supply of water from a tube well will have to be made.

To improve the water supply at the Ram Bagh a project for the construction of a tube well and installation of an oil engine pumping plant was undertaken. Uptil now the garden was irrigated from an old well provided with a pumping plant but the latter having become old was not functioning properly. With the advice of the U. P. Agricultural Department the construction of a tube well and the replacement of the old pumping plant by a new one has been undertaken and it is to be seen if the difficulty, so far felt, of inadequate water supply will be overcome by the new arrangement.

# BOMBAY PRESIDENCY AND SIND.

***By Mr. Q. M. Moneer.***

In the Western Circle comprising the Provinces of Bombay and Sind the total number of protected ancient monuments during the year under report was 737, of which 545 belonged to Government and 192 to private owners and trusts. Of these, 248 monuments were assignable to Class I, 442 to Class II and only 47 were referable to Class III. A sum of Rs. 82,482 was granted for conservation in the Western Circle. Out of this amount, Rs. 5,764 and Rs. 13,724 were paid to the Public Works Departments of Bombay and Sind respectively as agency and establishment charges.

*Elephanta Caves.*—The most important work in the Circle was that of the conservation of the Elephanta Caves. In November, 1936, the Government of India appointed a Committee of experts to investigate the causes that were responsible for the progressive deterioration of the caves and their sculptures and to suggest suitable measures for their preservation. The Committee consisted of Mr. J. F. Blakiston, Director General of Archæology in India as Chairman, Dr. S. S. Bhatnagar, University Professor of Chemistry at Lahore, Mr. A. Croad, Superintending Engineer of the Central Public Works Department and Mr. S. N. Gupta, Principal of the Mayo School of Arts, Lahore as Members and Mr. M. S. Vats (Superintendent, Archæological Survey, Western Circle) as Secretary. Khan Bahadur Mohd. Sana Ullah, the Archæological Chemist in India and Dr. M. S. Krishnan of the Geological Survey of India also assisted the Committee as experts. This Committee after holding a number of meetings in Bombay and at Elephanta unanimously reached the conclusion that the progressive deterioration of the caves at Elephanta and the priceless sculptures in them was due to (*a*) the physical action of sea-salts (chlorides and sulphates) and atmospheric gases and moisture which decompose the rock and widen and deepen the cracks formed in it and (*b*) the chemical action of rain-water which percolates through the numerous crevices which the sea-salts continue to cause in it. On the basis of this diagnosis the Committee considered the problem of the conservation of the caves and their parent rock both in its engineering and chemical aspects. To remedy the main cause of decay, *viz.*, the penetration of rain-water in the rock forming the roof of the main cave the committee suggested that all the decayed and spongy part of that rock should be scraped away to a level where the rock surface should show itself to be relatively hard and free from cracks and fissures when it should be treated with cement grout so as to close up all visible cracks. By thus rendering the rock impermeable at the top it was hoped to stop percolation of water to the ceiling of the cave. Similar measures were suggested as regards the preservation of the Eastern shrine and Cave No. III. As to the chemical aspect the Committee considered it necessary that the sculptures should first be thoroughly freed from the sea-salts with which they were deeply impregnated and then coated with a thin application of a preservative solution. For eliminating the salts the Committee endorsed the measures which the Archæological Chemist in India had evolved after experiments, *viz.*, repeated application of wet paper pulp over the entire surface so as to extract salts therefrom till the stone is rendered salt free. After this treatment the surface was to be given a coating of vinyl acetate solution, so as to prevent further penetration of salts. For

consolidating the more dangerous and seriously cracked sculptures the Committee suggested that suitable holes be bored in the body of the sculptures and insertion in them of dowels and pins of a non-corrosive alloy.

During the year an earnest beginning was made to give effect to these recommendations. The chemical treatment of the sculptures was undertaken by the Chemical Assistant, who was able to free 18 sculptures in the main cave from salt impregnation. The task of removing the decomposed and spongy parts of the rock above the roof of the main cave was at the same time taken up for execution. The rock stood some 71 feet thick above the roof of the cave, and after digging for some 21 feet it was found that the rock below was comparatively free from fissures and cracks. At this stage it was found that the exposed side of the hill overlooking the cave roof was a source of persistent seepage of water into the cave through its back wall as well as the ceiling. With the advice of the Superintending Engineer, Bombay Public Works Department, it was therefore decided that a wide and deep cement barrier be created in the rock at the back of the cave by drilling a series of suitably spaced holes over the entire length of 110 feet of the cave roof to the level of the cave floor and thoroughly inject them with cement grout at high pressure so as to fill all cracks and crevices in the rock. This work was entrusted to Francois Cementation Company, Bombay, Boring Engineers, who started operations after bringing to the spot the requisite machine equipment. Thirty holes, interspaced at six feet along the 110 feet alignment of the southern fringe of the cave roof were drilled, twenty-five to a depth of about 70 to 75 feet and five to about 40 feet by means of suitable drills of a diameter ranging from $2\frac{3}{4}$ inches above to $1\frac{7}{8}$th inches below (Plate I *a*). Water was pumped into the holes to wash out the fissures and cracks inside the rock and cement grout was injected at a pressure of 100 lbs. per square inch to render the barrier effective and permanent (Plate I *b*). Similarly a net work of 49 suitably spaced holes spread over the entire surface of the cave roof measuring 140′×120′ to a depth varying from 15′ to 25′ was drilled and cement grouted under pressure.

In addition to these important and elaborate measures three drains have been cut in the surface of the rock behind the alignment of the cement barrier and an equal number over the sloping surface of the north and north-west parts of the roof. On the whole these operations have been successful in arresting the penetration of most of the water into the cave roof.

The *BHADAR GATE—Ahmedabad City* erected between 1411 and 1420 A.D. is the most important of the remains of the royal citadel of the Sultans of Gujarat. In March 1928 a portion of the stone *chhajja* above the façade of this gate with its parapet suddenly collapsed leaving an ugly gap in the face of the gate and causing a perilous sag in the roof behind the parapet. To prevent any accident to the traffic passing through the gate the damaged roof was immediately dismantled. This roof has now been rebuilt in its original form and the missing slabs and brackets of the *chhajja* projecting from it replaced by new ones to match the original work.

At *BORSAD in Kaira District* is preserved a fifteenth century stepped well which is one of the few surviving examples of a striking architectural form peculiar to Gujarat. With its elaborate verandahs, windows and arches, of which as many as 13 are extant, this well with its seven storeys is approached by a long flight of steps descending to the water level. Due to the ravages of saltpetre the brick masonry of this well had begun to deteriorate at several places, while cracks had

developed in the coping of its parapet walls. The affected masonry after being subjected to a thorough wash with tamarind water has been extensively pointed with lime in its open joints in the manner of the original work. The cracks in the parapet have also been thoroughly freed from loose sediment before being treated with cement grout. A number of unsightly modern pillars on the steps descending to the water were removed.

*PAVAGADH*, a well-wooded hill fort about 2,727 feet above the sea level and nearly a mile to the south-west of Champaner has a number of ancient Jaina and Brahmanical temples, side by side with extensive remains of a Rajput citadel of the 14th Century A.D. The ascent to the top of this citadel is rather steep with long flights of rock-cut steps passing through a series of fortifications, with strong massive gates, consisting of double and triple entrances. In the flight of steps leading to the second or Budhia Gate a large number of treads had become very much worn out rendering them slippery and dangerous. The missing steps have now been supplied in cement concrete, matching with old each step covering a space 8 feet wide from the hill side slope. The original rain gully on the hill-side nearest the flight of steps has been widened and deepened to provide proper storm water channels.

*KONDIVTE CAVES.*—At *Kondivte* about 4 miles from Andheri railway station two groups of Buddhist caves are cut in the south-east and north-west face of the trap-rock respectively. The north-west face group comprises only 4 caves, while the south-east has fifteen, both dating from the second to sixth centuries A.D. The Cathedral or Chaitya cave in the larger group is remarkable for its resemblance with the Sudama Cave in the Barabar hills in Bihar except that at Kondivte the rock-cut stupa occurs in a chamber under a circular dome at the back of the hall. This stupa was split by some natural agency in two, the front portion sinking a few inches below its original position. This part was jacked up and joined with the rest by means of gun metal clamps. Other work done includes the exposition of the plinth of Caves I and II, grouting cracks in the ceiling of Cave X, renewal of steps leading to Caves X and XI and removal of modern accretions to Caves XIV and XV.

At the well-known hill fort of *Sinhagarh, near Poona,* which dominates the Mutha valley, the top masonry of one of its main entrances, known as the Kalyan Gate, which had collapsed during the monsoon, blocking the passage through the Gate, was thoroughly repaired.

At the group of *Buddhist caves at Bedsa* six miles south-east from the Kurla Caves the main work comprised the removal of whitewash, formerly done by the P. W. D. from the pillars, walls and ceilings of the Chaitya and Vihara Caves. The two 25-foot high octagonal columns standing in the verandah of the chaitya cave, which were wrongly restored by the P. W. D. were reconstructed in ashlar masonry marching with the original.

*Bhulesvara Mahadeo temple at Malsiras, District Poona*—This temple raised on a lofty basement with a wide platform all round it, is a Medieval temple, extensively altered in the 18th century A.D. Its original fabric comprising a sanctum, an antechamber, a sabhamandapa and nandi pavillion was extended by Brahmendra Swami the guru of the Peshwa Bajirao I, by the addition of a parapet wall over its original *chandraśālā* and four tall minars at its four corners. These additions which do not speak well of the sense of aesthetics and propriety of the Maratha builders besides giving the monument an erroneous appearance similar to that of a mosque imposed a heavy strain on the foundations

with the result that while its walls tended to go out of plumb, the wall of the *chandraśālā* on west so completely lost its balance that the roof above was left hanging in a parlous condition. It was thus necessary not only to repair the disturbed and dismantled masonry of the original fabric of this temple but to relieve it of the extra load which the later additions had imposed on it. All the four minarets were therefore dismantled and the missing and damaged parts of the original temple were made good. Enough of the old stones of the temple were fortunately available in the debris near the site to be utilised in the repairs. (Plate IV.)

The underground temple *in Sholapur Fort* with a well preserved pillared mandapa, *garbhagriha* and porch brought to light in 1919 in the north wall of the Fort was in danger of being damaged by the collapse of the rampart wall near by. During the year it became necessary to dismantle the overhanging part of the wall and to replace it with a screen of dry masonry.

The *Siddhesvara temple at Brahmapuri* in the Pandharpur taluk is an ancient Hindu temple of the Hemadpanti style of architecture dating from the 11th-12th century A.D. Its paved court and ghats connecting it with the river Bhima which flows close beneath it are among the noteworthy features of this temple. The roof of the temple proper as also of the main entrance were found to have developed a series of long and deep cracks while a part of the ghat on the north side of the temple was being gradually undermined by the river. This year the cracks in the roof have been effectively grouted and the masonry of the ghat underpinned and rendered water-tight.

At the *Pandu Lena Caves* 5 miles south of Nasik town, the openings of the rock-cut cisterns occurring in front of Caves Nos. 21 and 23 were fitted with suitable iron gratings as a safety-first measure.

*Dindori taluk.*—The remains of the ornate *Mahadeva temple at Ambegan* 13 miles west of Dindori which from the style of its exquisite carvings is assigned to the 11th-12th century A.D., came in for repairs this year. All rank vegetation has been eradicated, the cracks and fissures in the masonry thoroughly grouted and the damaged masonry of the plinth made good by underpinning.

The *temple at Deothan* about 14 miles from Yeola, District Nasik remarkable for its L-shaped plan was taken in hand for repairs, particularly to its roof and the stone columns supporting the roof.

*Bijapur town.*—Of all the monuments of Adil Shahi Kings at *Bijapur* the most sacred and locally the most frequented is the one called *Āsār Mahal* or the Palace of the Relic. Erected in 1646 A.D. by Sultan Muhammad (1626-1656 A.D.) to house the King's Court of Appeal, this building had had to be utilized as the repository of the two hair of the Prophet's beard which a Persian pilgrim from the Hedjaz had presented to the preceding Sultan, Ibrahim Adil Shah II (1580-1616 A.D.). This monument is exceptional for the massive and fine wood work of its beams, joist and pillars, which, however, were subjected to an undue strain under the weight of the terraced roof of the large verandah in front. It was therefore decided to replace the dead concrete of the terrace pavement with a layer of fresh cement concrete 3 to 4 inches thick. As the old concrete was being scraped at the south end of the terrace a portion of the roof below gave way, with the wooden rafters and planks following suit. This mishap enhanced the difficulty and extent of the task. The collapsed portion of the roof was replaced with 6 inches thick r.c.c. slab and the terrace was furnished with cement concrete all over.

In the *Bijapur Fort wall* between the Mecca and Shahapur gates, one of the bastions supports the famous Malik-i-Maidan gun, was damaged by heavy rain. This breach has been repaired, the old masonry carefully reproduced, and a number of additional weep holes provided to allow rain water to escape.

The ancient *fort of Jaygarh, District Ratnagiri*, standing close to the shore on a gently sloping ground hardly 200 feet above the sea level, comprises an upper citadel and a lower line of fortifications. Built in the sixteenth century A.D. by the Adil Shahi Kings it passed on to the Naik of Sangameshwar, then to the Maratha kingdom and finally to the Maratha sea-lord Angria. One of the bastions which had partly collapsed during a heavy shower was rebuilt in its original design in the north-west wall of the Fort.

The chief object of interest at *Malvan, District Ratnagiri*, is *Sindhudurg* or the Ocean Fort, an extensive coastal citadel built in 1665 A.D. by Shivaji. Though its walls are no where higher than thirty feet, they are furnished with thirty-two towers each 40 to 130 yards apart. The fort walls enclose an area of forty-eight acres in which stand a few small temples, one of which is dedicated to Shivaji. A number of panels in the leaves of the ancient massive wooden door of the main entrance of this fort, having decayed beyond repair have been replaced by new panels of stout and durable wood.

*Honavar taluk.*—Sixteen miles east of Honavar in North Kanara district and on the right bank of the river Sharavati lies the ruined village of *Gersappa* known for the famous falls. Among the old Jain temples here the most interesting and relatively well preserved is the *Chaturmukha Basti.* Of cruciform design, this temple is a plain but solidly built structure with a central shrine containing four seated Jaina images and four porches facing the cardinal points.

The roof and the walls at the south-west corner of the temple which had suffered particalarly heavily from the effects of weather has been repaired and rendered water-tight. The compound on all sides of the temple has been cleared of debris, serviceable material being picked up and utilized or else carefully stacked unobtrusively in the compound for future use.

## SIND.

*Mohenjodaro.*—A sum of Rs. 1,476 was spent on repairs to buildings excavated in DK Area—' G ' Section at *Mohenjodaro*, particularly Blocks 1, 2, 3, 8A, 9, 10 and 11 and the decayed portions of the side walls in certain lanes and streets known as the ' Long Lane ', ' Fore Lane ', ' Loop Lane ', ' West Street ', ' Central Street ' and ' First Street '.

The greatest difficulty, which confronts the Department in its task of preservation of the structures laid bare at Mohenjodaro, arises from the most baneful effects of saltpetre. So long as the buildings are covered up in *débris*, they are well preserved. But as soon as they are excavated, and exposed to air, saltpetre gradually finds its way to the surface and covers the brick walls which will tend to disintegrate rapidly. The action of saltpetre is worse in the dry winter months, when wall after wall crumbles down. What is worse, the salt accumulating at the foot of walls is a standing menace to the remaining structures. Before any preservation work is commenced, this earth has therefore to be removed and where necessary replaced with fresh earth from salt-free areas.

The repair programme comprised the walls in the interesting quadrangle in the Block No. 11 situated at the western extremity of the DK Area, the outer walls in Blocks 18 and 21, underpinning of certain high walls in DK (G) area and the restoration of the drainage channels and cesspools in the 'West Street' and 'Central Street'.

## BIHAR.

***By Mr. A. Ghosh.***

Over Rs. 6,000 were spent during the year on the conservation of the excavated remains at *Nalanda*. This includes such ordinary measures as filling of cracks, eradication of jungle, clearance of drainage channels and patch repairs to the stucco figures. The special repairs are referred to below.

The conservation of the eastern, northern and southern rows of cells in Monastery No. 9 was completed during the year. In some of the cells of the southern row, ancient door-jambs and door-sockets have been carefully preserved, as also a later wall which blocked the doorway of a cell. The tops of the walls were made water-tight with a few roughly laid courses of bricks in lime mortar and the damaged concrete floors of the cells repaired, care being taken that both the earlier and later floors exposed in certain cells were preserved. The top concrete of the parapet wall of the courtyard and of the well inside was also preserved by repairing broken patches and suitably toning them.

All the cells in the southern row of Monastery No. 10 were conserved, in course of which the earlier levels of a few cells on the west were examined. Here it was revealed that the later floors had solid foundations in the shape of descending offsets on two or three sides similar to the construction found in the centre of the main temple at Paharpur. It appears that the doorways of the earlier cells were first blocked up before the construction of these offsets. Two cells at the southern end of the western row were also attended to and the side-walls of the concrete staircase repaired, care being taken to preserve the holes in the external wall of the cells. The concrete coping of the parapet wall of the courtyard was freed of debris and repaired in the same way as in Monastery No. 9.

The damaged external wall of the southern half of Monastery No. 11 was conserved and the tops made water-tight by a few courses of roughly laid bricks.

In Chaitya Site No. 13 the external walls on all sides were repaired and the damaged moulding work replaced at several places. The later plain brick walls built directly upon the ruins of the earlier ones were also conserved and provided with a water-tight top.

Of the grand staircase to the east of the main structure which had almost entirely disappeared, only a few steps were rebuilt in accordance with old existing clues along with the side-walls of the portico and the staircase. The damaged concrete floor of the portico was made good with new concrete mixed with coal-dust and sloped towards the original drains existing on either side of the entrance. The flight of steps giving access to the portico was also repaired.

In repairing the exterior walls a human skull was found buried in the core of the back wall of one of the niches in the north-east corner adjoining the

staircase. From the circumstances of the find, it appears that this immuration must have been deliberate.

At *Rajgir* Rs. 950 were spent in carrying out the necessary measures of conservation.

In the Maniyarmath area a later brick wall standing on debris over the semi-circular platform at a distance of about 8′ from the western façade of the main cylindrical shrine was supported over a length of about 43′ by a concrete lintel resting on concrete pillars. The south external wall of the brick structure ancillary to the main shrine which had previously yielded the fragments of a red stone inscribed Nāga sculpture was supported by a concrete retaining wall. A brick drain, 35′ long with slatestone covering, was provided through the south enclosure wall, in order to drain out rain-water from the western part of the Maniyarmath area. The stone wall to the west of the main shrine, forming its latest enclosure wall, was underpinned with lime and *surkhi* mixed with coal-dust. Twenty-five damaged brick shrines or altars (both square and circular) discovered within the Maniyarmath area were repaired, their tops being rendered water-tight and underpinning with concrete done where necessary. The path leading from Maniyarmath to the Sonbhandar cave was dressed up and a small causeway of cement concrete upon a stone soling was built across the intervening treamlet thus making the cave approachable throughout the year.

In the Sonbhandar cave the cracks and gaps in the ceiling were packed with stone pieces in sand and cement, further strengthened by cement concrete and then finished with suitably coloured cement to match with the adjoining surface. At several places copper rods were also fixed inside with a view to reinforce the concrete work.

The platform situated in front of the caves on the top of the Gṛidhrakūṭa Hill was made water-tight with lime and *surkhi* upon a soling of stone pieces.

The gaps in the masonry of the southern bastion and the adjoining stone walls of the New Fort situated near the Inspection Bungalow were filled up with lime and *surkhi* mixed with coal-dust.

The earlier brick enclosure of the portico to the east of the Mahādeva temple on the Vaibhāra Hill was conserved to an average height of 8′ from the concrete floor. The outer face of the northern and southern walls including the repair of two niches in the southern wall was made good, and of simple brick mouldings such as dentils, projections, etc., in the northern wall. A portion of the earlier external wall of the portico at the north-west corner was also made good to an average height of 2′ or so, and the edges of plaster fragments still adhering to the wall were secured with a cement fillet. The later walls of the shrine chamber itself on the southern and western sides (excepting a portion in the north-western corner) were repaired to an average height of 10′ from the botton including a 3′ offset. The earlier wall of the shrine was also conserved on the north up to a height of about 3′ in the upper portion only. Two small brick shrines to the south and east of the temple were also repaired up to a height of about 3′ from the ground level. The exterior walls of the platform of the portico and the concrete parapet on the northern side were repaired. A little gap was kept open at the northern end of the eastern walls with a view to show the earliest concrete pavement of the platform.

Four brick shrines to the east and north-east of the Jaina shrine on the Vaibhāra Hill were repaired to a height of about 3′.

*Site of the Mauryan Pillared Hall at Kumrahar.*—A footpath was made all round the site of the 'pillared hall' and sloped outward so as to prevent flood water rusing into the excavated area, which is at least 25′ deeper than the surrounding lands. This step, it is hoped, will prevent the site from being a muddy pool throughout the year.

*Lauriya Nandangarh.*—Excavations at the stupendous mound known as Nandangarh in the Champaran District resulted in the exposure of a unique brick temple of early date, and it was felt necessary that ordinary measures of conservation should be undertaken to preserve the excavated monuments. Nearly all the outer basement walls so far exposed were treated, the base being underpinned and the top rendered watertight. The walls of the next higher terrace were repaired to a suitable height and the missing mouldings replaced at places. The walls forming different terraces in the western façade of the *stūpa* were treated similarly. A large portion of the second *pradakshiṇāpatha* was re-soled. Several *kuchcha* and *pucca* drains were provided to divert rain-water from the excavated area.

Besides the above works carried out direct by the Department, the following special repairs were executed through the agency of the Provincial Public Works Department.

*The Rock Sculptures at Patharghatta,* District Bhagalpur, continued to receive attention. A newly exposed cave with a verandah in front was cleared; a retaining wall was erected to support overhanging blocks of stone, and deposits of silt were removed from the cave at the foot of the Vaṭeśvara Mahādeva temple.

At *Kesariya* in the Champaran District the construction of an approach road to the *Buddhist Stūpa* has been taken in hand and will be completed next year.

Repairs to the famous *Rock-cut Caves on the Barabar Hills* in the Gaya District were completed this rear. Repairs to cracks and fissures in the rock and extensive clearance of jungle were the main items and it is a matter of gratification that the condition of these historic caves is now satisfactory.

In the *Fort walls at Monghyr* the dilapidated masonry of the revetment wall at the back of the Superintendent of Police's residence was dismantled and rebuilt; repairs to the eastern gate of the Fort and the rampart wall were also completed.

Some repairs were done to the excavated remains of the ancient city of Vaiśālī, locally known as *Raja Baisal-ka-garh at Basarh,* District Muzaffarpur, but further work was stopped as the owners of the place refused to enter into an agreement with the Department.

The silt that had accumulated in the bed and on the steps of the tank attached to *Makhdūm Shāh's tomb at Maner* in the Patna District was cleared.

The rampart walls of the *Ancient City of Manjhi,* District Saran, were exposed at places. The only clue to the date of these ruins so far is an inscribed brick with the word *Śrī-Prathamāditya* in Gupta characters, found here by Dr. Spooner in 1915 and now preserved in the Indian Museum, Calcutta.

In the *Arrah House* of Mutiny fame, at Arrah, the headquarters of the Shahabad District, the wood-work in the staircase was renewed, the plaster of the floor of some of the upper rooms was made good and the door-jambs refixed.

## ORISSA.

***By Mr. A. Ghosh.***

Some land was acquired near the *Atharanala Bridge at Jajpur*, District Cuttack, for the proper preservation of the monument and steps were taken to prevent accumulation of water near the piers of the bridge.

## CENTRAL PROVINCES AND BERAR.

***By Mr. A. Ghosh.***

The *Temples at Baihar*, District Balaghat, remained neglected for a long time. Originally there were at least three temples, of which only two and the ruins of a third one are extant. The fallen debris were cleared so as to expose the ancient remains, the loose stones being stacked with care.

In the *Old Fort at Lanji* in the same District, an unsightly cattle-pound near the main entrance to the courtyard in front of the Suraj gate was acquired. The plinth of the brick structure in the centre of the fore-court was exposed, the debris of the collapsed portion of the rampart wall were removed; the plinths of the rampart walls were exposed inside and outside the Suraj and western gates; and the loose images from a neighbouring temple were listed, arranged and numbered.

At the *Fort at Pauni* in Bhandara District some repairs were carried out, including the removal of jungle growth, filling of cracks and patch repairs to the masonry of the gateway. Pauni is one of the few really ancient sites in the Central Provinces. One of the mounds has yielded a stone relic box apparently of the type of the Piprahwa stone box. There is also a large stone slab bearing an inscription of the 1st century A.D.

In the *Mahādeva Temple at Nagra*, District Bhandara, the leaky old plaster was scraped off from the flat roof which was rendered water-tight. The area round the temple was properly dressed up and vermilion daubs were removed from the carvings on the stone architrave of the main door to the shrine.

In the *Mahādeva Temple at Gatora*, District Bilaspur, the damaged stone steps around the temple were restored.

The repairs to the *Mughal Fort at Joga*, District Hoshangabad, were completed this year. The fallen portions of the north-western bastion were rebuilt, portions of the roof repaired and the walls underpinned where necessary.

In the *Chausaṭh Yoginī Temple at Bheraghat*, District Jubbulpur, *moorum*-rammed walks were provided round the circular wall for the convenience of visitors and the inner courtyard was properly dressed.

The floor of the arcaded *Dalans* attached to the *Madan Mahal at Garha* in the same district were cleared of stones and debris and the level of the courtyard was lowered for the proper drainage of the area.

At the *Mahal Gul Ara near Burhanpur*, District Nimar, a charming spot formed by damming and regulating a rivulet was cleared of its silt.

A strip of land all round the circumvallation of the *Khimlasa Fort*, District Saugor, was acquired for the proper upkeep of the monument.

Many monuments were provided with the usual notice boards and direction boards and Government land was demarcated in several places by short boundary pillars.

## BENGAL.

***By Mr. T. N. Ramachandran.***

During the year a sum of Rs. 25,105 was spent on conservation in Bengal, of which Rs. 15,935 were spent on annual repairs and Rs. 9,170 on special repairs. One of the works directly executed by the Archæological Department was the conservation of the excavated remains at *Paharpur, District Rajshahi.* The work entailed the dismantling and rebuilding of portions of walls affected by saltpetre at the north-western corner of the first terrace of the main temple, at the south-western corner of the Sanitary block, in the east wall of the outer pillared hall at the main entrance and at the walls with corbelled arch openings of the cells to the east of the main gate. Certain portions of the northern section near the main gate and the southern section of the monastery area were also attended to, the principal work being reconstruction of the outer facing of the wall of certain cells which had bulged out.

Special repairs to the *Deul at Mathurapur*, Faridpur District, were also undertaken directly by the Department, on which a sum of Rs. 2,500 was spent (Plate II *b*). Preliminary work such as clearance of jungles, sorting of bricks and plaques, and cutting and removing of *pipal* trees were completed. Renovation of the 12″ thick face brick work in cement mortar and with hoop-iron reinforcement as also of missing ornamental mouldings in the superstructure was in progress. The hearting was filled with brick in lime and lime concrete.

Special repair works were entrusted to the Communications and Works Department at five monuments, *viz.*, (1) *Fort Mounds at Bangarh, District Dinajpur*, (2) *Shyamsundar Temple at Madanpur, District Bankura*, (3) *Qutb Mosque at Ashtogram, District Mymensingh*, (4) *Patpur Temple near Vishnupur, District Bankura* and (5) *Gunmant Mosque at Gaur, District Malda.*

The first three were undertaken in 1936-37 and were completed, while the last two were fresh works commenced during the year. The survey of the Bangarh mounds in the District of Dinajpur was completed this year and a survey plan for the protected area has been prepared. In the *Shyamsundar Temple* at *Madanpur*, District Bankura, lime-punning to walls was renewed while other works to the arch, ornamental brick works, terraced roof and terraced floor were completed. In the *Patpur Temple near Vishnupur*, District Bankura, a cement concrete pipe was provided in the *bund* and earth work was filled up wherever necessary, while at the *Gunmant Mosque at Gaur*, District Malda, a rolled-steel joist was provided inside the wall, as a protective measure to the seriously damaged arch of a dome, of which the face work was done with cement concrete dashed.

## ASSAM.

***By Mr. T. N. Ramachandran.***

In the Province of Assam, the total expenditure on conservation was Rs. 7,446 of which Rs. 4,163 represent the sum spent on annual repairs and Rs. 3,283 that on special repairs.

At *Gaurisagar, District Sibsagar*, moss was removed from the roof of the NATMANDIR and the three main temples. Brick work in lime with 50 per cent old bricks and cement concrete, mixed with *surkee* and finished with lime rubbing for preventing leakages from the roof were the main works done to the *Natmandir and Sibdole Temple*. In the *Bishnudole Temple at Jaysagar* the brick work in its plinth, on the top of its southern, western and northern walls and in its *Natmandir* was repaired, while cement concrete mixed with *surkee* and with a finish of lime and mortar was renewed on the top of the south-western and northern walls. Similar works were done in the *Sibdole Temple* of the same locality. In the *Debidole*, however, cement concrete mixed with *surkee* and with lime and mortar finish as in the other two monuments was renewed on its roof. At the *Baradole Temple at Bishnath, District Darrang*, minor works such as provision of woven wire fencing with an iron wicket gate, of expanded metal door and windows fixed in wooden frame, an enamelled notice board and a reinforced concrete pipe culvert in the approach way were executed. Reinforced concrete boundary pillars were provided to the rock-cut *Caves at Jogighopa*, District Goalpara, to demarcate the area of the monument.

## MADRAS PRESIDENCY AND COORG.

***By Mr. T. N. Ramachandran, M.A.***

In Madras Rs. 12,169 and Rs. 17,502 were spent on special repairs and annual repairs respectively by the Public Works Department, and a sum of Rs. 3,277 was spent by the Archæological Superintendent. The total expenditure thus amounted to Rs. 32,948 against a grant of Rs. 33,374. In the Province of Coorg the amount allotted for conservation work on annual repairs and maintenance was Rs. 295.

The departmental work consisted of the construction of a shed for housing the sculptures at Amaravati in Guntur district which were long exposed to the effects of rain and sun. 100 bi-lingual enamelled steel notice boards were also purchased.

The Public Works Department carried out as many as 46 special repairs mostly of a minor character in 15 out of 26 districts. Such of them as are of special interest are detailed below :—

*Kistna district.*—The base and *sikhara* of the 'Akkanna Madanna Cave' temple at the foot of the Indrakila Hill at Bezwada were exposed by clearing accumulated vegetation and *débris*. One of the *five rock-cut temples on the Government hill at Mogalrajapuram*, near Bezwada, was also cleared of *débris* and some leaks in the rock were closed. Quarrying for stone and blasting operations being in progress dangerously near these caves, steps are being taken to prevent blasting within a radius of four furlongs. Should these activities continue further here it may be necessary to issue a notification under Section 10A of the Ancient Monuments Preservation Act.

*Guntur District.*—The ancient *Buddhist stupa at Bhattiprolu* which is situated close to the village was being misused by the people of locality. To prevent such misuse, a barbed wire fencing with tram rails in concrete broken stone in lime mortar was provided around the Buddhist stupa with a teakwood gate and locking arrangements.

*Cuddapah District.*—At the *ancient fort at Siddhavattam* gaps in the walls of the fort were filled and the side of the entrance gateway to the tomb was set right by providing dry stone pitching. Rough stone walls on both sides of the steps leading to the tomb were also pointed with cement mortar and the broken terrace over the ground floor was supported.

The stone masonry in the west wall of the *Raghavesvarasvami temple at Pushpagiri* was dismantled and rebuilt with lime mortar. The displaced roof slabs were dismantled and re-set in lime mortar and the terrace finished in cement concrete. The cut-stone lintels were renewed and the walls were cement pointed both inside and outside. The temple was also provided with a door with iron bars.

The masonry wall of the *Sivakesavesvara temple* was plastered with cement. The rotten back door of the Siva temple was renewed. Stone props were provided for supporting the cracked lintels and covering slabs of the roof of the Siva temple. The exposed joints of the walls and the floor were pointed with cement. The fallen rough stone wall in front of the *Indranathesvara temple* was renewed by repacking with old rubble stones and the platform was levelled.

*Kurnool District.*—Painting the roof timbers, plastering the compound wall, pointing stone work, rebuilding disturbed masonry and fixing wind-tie to the roof were some of the repairs carried out to Bastion No. 1 of *Beech Ghantki Buruz at Kurnool*, in addition to miscellaneous repairs. At the remains of *Gopal Raja's palace at Kurnool*, ordinary repairs were done, such as pointing the open joints in the walls, grouting the cracks and providing cut-stone work in lime mortar for buttress wall to the arches.

*Chittoor District.*—In the *Mahal at Gurramkonda*, the leaky terraces were made water-tight, the doors and windows of the main building repaired and painted and *chajja* work was renewed whrever necessary. Roads and pathways were set right and a warning notice board provided.

At Melpadi, in the *Somanatha temple*, the cut-stone lintel over the main gateway was renewed. The main gate and the terrace of the *Vighnesvara and Setunatha* shrines were also attended to.

*South Kanara District.*—The stone *mandapa* behind the colossal Jain statue of *Gummatesvara at Karkal* was leaky. The terrace of the mandapa was relaid with cement concrete by giving proper slopes. The ceiling and the stone cornices of the mandapa were set right and the walls on either side of the entrance were plastered.

*Madras.*—The historical *old Town Wall at Madras*, said to have been built by M. Paul Benfield, an engineer friend of Warren Hastings, was taken up for repairs. The work is still in progress.

*North Arcot District.*—The historical *fort at Wandiwash* attributed to the Mahrattas is now almost a heap of ruins. The repairs done to it include the construction of a pathway by the side of the fort walls, of which detached portions far gone in ruin and likely to collapse were dismantled and removed. The north side of the magazine passage was pointed with lime mortar. The fortgate was provided with an expanded metal door with locking arrangements, and cracks on it were grouted.

*South Arcot District.*—To maintain the Church compound of the *Roman Catholic Portuguese Church at Porto Novo* in a tidy condition and to prevent misuse of the place to which it was subjected, a compound wall 6 feet high all round with a gate provided with locking arrangements was constructed.

*Tanjore District.*—At Tanjore, the ramparts of *Sivaganga-Little Fort* enclosing the *Great Brihadisvarasvami temple* was cleared of the rank growth of vegetation. Certain repairs to the masonry work in the east rampart wall were also done.

The fallen portion of the compound wall within the *Dansborg Castle at Tranquebar* was reconstructed. Repairs to the gateway and plastering of the walls were also done, as also under-pinning the compound wall.

In the *Dutch Cemetery at Negapatam* the old worn out plaster was scraped out and renewed in cement. Scrub jungle was cleared, the compound was spread with gravel and the walls white-washed with shell lime. The roof was repaired by providing teakwood scantlings and renewing the pantiles. The roof of the coffin shed and the store room in the compound was repaired by renewal of rafters.

*Anjengo District.*—In the *fort area at Anjengo*, the gates were tarred and clasp and bolt were provided on the quay of the flag-mast. Some of the cavities on the west and the exterior south wall of the fort were suitably underpinned and re-plastered.

*Tinnevelly District.—The rock-cut cave temple with inscriptions and paintings of about the 7th century A.D. in Varnachimalai, Tirumalaipuram* is one of the most important monuments. Being cut on the face of a hill at a height of 10 feet from the ground access to it is very difficult. Iron fencing with gate arrangements and an iron ladder giving access to the temple have been provided. A warning notice board under Section 16 of the Ancient Monuments Preservation Act is also provided.

Patch repairs carried out to the lime plaster of the compound wall of the *Dutch Cemetery at Tuticorin* in previous years proved of no avail, as the lime plaster could not withstand saline action due to the close proximity of the sea. The compound wall was plastered with cement mortar after scraping out the old plaster.

Annual repairs were carried out to a hundred monuments or nearly one-third of the number on the list of protected ancient monuments in the Presidency. Such important monuments as the hill fortress of *Gingee* in *South Arcot District* the famous *Pallava rock-cut shrines of Mamallapuram in Chingleput District*, and the ruins of the historic city of *Vijayanagar* (*known as Hampi*) in *Bellary District* are however looked after regularly every year.

Till October 1937, there was no uniformity in providing warning notice boards to the protected ancient monuments in this Circle. The Government of Madras in their order No. G. O. Ms. 2327, Edn. & P. H., dated 6th October 1937, approved the proposal of the Superintendent that in future enamelled steel notice boards with white letters on a blue background should be used for all protected ancient monuments and that the existing notice boards should be replaced only when they became unserviceable. Accordingly 100 bi-lingual enamelled steel notice boards with Tamil, Telugu and Kanarese as the vernaculars, were stocked in the office of the Superintendent for being supplied to the several Executive Engineers on requisition by them.

## Coorg Province.

Only annual repairs such as clearance of rank vegetation, closing of leaks and grouting and pointing of masonry works and repairs to doors and approach roads, were carried out to the *three Jain temples at Mullur*. In the *Fort and Rajah's seat at Mercara* repairs of a similar nature were carried out.

# RAJPUTANA AND CENTRAL INDIA.

## DHAR STATE.

***By Mr. S. B. Dighe, State Engineer, Dhar.***

The total expenditure on the ancient monuments in DHAR STATE amounted to Rs. 12,518 of which Rs. 5,128 was spent on conservation works and Rs. 7,391 for maintenance of the monuments. The following is a description of the conservation work carried out at the more noteworthy monuments.

*Jahaz Mahal, Mandu.*—As the entire roof of the grand palace measuring 202 ft. ×47 ft. was leaking the old absorbant concrete layer, therefore, was replaced by a new coat of 4″ thick lime concrete. Due to some defect in the foundations big longitudinal cracks had appeared in the roof somewhat parallel to the long walls relaying the new concrete which had to be thoroughly grouted and filled up with lime mortar before renewing the top concrete. The open joints in the east and north walls of the main building were closed and the exposed core rendered water-tight. The missing portion of the thick old plaster of the dome over the central pavilion was renewed and the whole surface around the dome made water-tight and toned down to match the old work. The frieze over the *chajja* and *kanguras* ewas repaired following the traces of the old designs. Gaps in the walls of the water raising platform as well as the sump were filled up. The numerous small and big gaps and cracks in the roof of the north-west wing of the palace were filled up with lime mortar and the exposed core of the roof made water-tight. The parapet wall, together with the combined water channel below, was repaired, the water spouts being supplied where necessary. The mixed stone heap from the compound was removed and arranged in neat stocks. The displaced *dasa* stones below the newly fixed water spouts were refixed in their proper places and some portion of the spiral water course and the channel in north pavalion repaired. Cracks in the big roof, caused by the 1934 Earthquake were filled with lime mortar and debris removed from the western room where the loose *dasa* stones were refixed in position. The outer staircase on the north was repaired, gaps in the side wall closed and the core made water-tight. Debris between the central pavalion and rear staircase were removed.

*Nahar Jharoka Palace.*—The broken marble lintel over the balcony was repaired and refixed in its proper place. The exposed core of the walls was made water-tight and the work of restoring the marble balcony was completed. Gaps and open joints in the wall were closed, jambs repaired and badly undermined portions were underpinned. The overhanging roof of the passage was supported with wooden joists covered with lime plaster. The overhanging masonry of the wall above the door opening of the north wall was propped by red stone supports in angle iron frame, after filling up the gap behind. The fallen pillars round the reservoir outside the palace in the East wing were refixed.

*Ek Thamba Mahal.*—The work of fixing the doors to the four entrances was completed and the Gulambers made bat-proof, by fixing expanded metal frames.

*Delhi Gate.*—The dry stone wall to the west of the Gate being in a precarious condition was dismantled and rebuilt and the inspection path over the wall up to the square bastion on West was improved. The main vault above the Gate is showing signs of displacement; glass strips have, therefore, been fixed as tell-tales to watch further movement. The missing steps of the gate were replaced in dry stone masonry, the adjacent mosque cleared of loose stones and the platforms were repaired.

*Champa Baodi.*—After removing the loose and bulging out masonry of the walls of this well their tops were rendered water-tight. The missing red stone pilasters were restored, debris removed and roots extricated from the east side of the Baodi and the water arrangements restored. Debris were also removed from the south side of the water raising platform. The missing springing stones of the arches were restored and displaced bases of the pillars refixed in position. The broken red stone sills and jambs were repaired and refixed in their original places.

*Hindola Mahal.*—Debris and decayed concrete were removed from the top of the walls of the big hall and the top made water-tight by relaying 3″ thick concrete. All the cracks in the roof and walls were filled up and the core above the brackets made water-tight. The brick compound wall was repaired and its top made water-tight. As the big roof of the Zanana gallery was leaking profusely, the whole absorbant concrete layer was replaced by 4″ thick new lime concrete. Bulging out *dasa* stones were refixed and badly undermined portions of the wall underpinned.

*Dilawarkhan's Mosque.*—The southern side wall of Urdya stone amygdaloidal trap was restored and the top made water-tight and debris were removed.

*Lohani Caves.*—The badly undermined foundation of the long west side wall was underpinned with dry Urdya stone ashlar masonry or with rubble in lime masonry. A new flood water drain was made running west from the *kunda* in the direction of the Lohani Gate. A masonry wall was also built near the upper gate in order to divert the flood to the hill side.

*Adhar Gumbaz.*—To save the dome chamber from collapsing, the south-east and south-west corners were underpinned and the displaced *dasa* stones reset. Missing red stones of the ashlar masonry of the plinth as well as the *dasa* stone were restored.

*Baz Bahadur's Palace.*—Gaps over the outer arch opening of the South Zanana court were filled up. The fallen *gola* stones of the north side *dalan* and room near the balcony were repaired and refixed. The displaced dasa stones were also reset and the core made water-tight. The bulging out header stones below the *gola* were refixed and the wall above the *gola* was underpinned and its top rendered water-tight. Debris from the staircase in north and the north-east corner were removed.

A heavy mass of fallen debris was removed from the south-east corner of *Gadashah's shop*. The paintings in the north-west room of *Gadashah's palace* were made accessible by fixing wooden joists and lime concrete over them in accordance with old indications. The top of the east wall was repaired and its core made water-tight.

## SCTION II.—TREASURE-TROVE.

Punjab.—Khan Bahadur Maulvi Zafar Hasan, Honorary Numismatist to the Punjab Government for Muhammadan coins, reports as follows:—

"The fifteen silver coins discovered at the Tahsil of Pakpattan and 424 silver rupees discovered at the village of Rasulpur, Tahsil and District Gurdaspur, and mentioned in the last year's report were disposed of during the year under report.

Only one hoard was reported to me during the year under review. It was discovered in the village Jundla, Tahsil and District Karnal, and consisted of 17 silver and 14 billon coins. The silver rupees inluded the issues of Alauddin Khalji, Ghiyasuddin Tughlaq, Qutbuddin Mubarak Shah Khalji, Muḥammad Shāh Tughlaq and Nasir-ud-Dunya Waddin Ibrahim Shāh Sultan, while billon pieces represented the coins of Alauddin Khalji, Ghiyasuddin Tughlaq and Muḥammad Shāh Tughlāq. One of the billon coins, a corroded one, was returned to the Deputy Commissioner, Karnal. The remaining 13 billon coins together with 17 silver rupees have been acquired by the Deputy Commissioner for Rs. 10-5 and will be disposed of in due course.

The Deputy Commissioner, Karnal, states that the above-mentioned hoard was discovered by one Zilledar *alias* Jelu, son of Muhammad Hanif Khan, Rajput, and Makhmul *alias* Phul, son of Maula Bakhsh, Rajput, in the course of digging a brick mound, called Gohi Joharwala, in the village of Jundla, which is related to have been founded by Raja Rae, nephew of Rana Har Rae, the Raja of Sanbhar. Of the coins, two represent silver rupees of Nasir-ud-din Ibrahim Shāh and possess a special interest as the ruler whom they represent seems to be Ibrahim Shah of Bengal (1323-25 A.D.) whose issues are rare."

Dr. K. N. Sita Ram, Honorary Numismatist for Hindu and Buddhist coins, Punjab, writes—" The only discovery of coins reported to me during the year was from a mound (*tibba*) at the village of Machchrala in the Gujranwala District. While a grave was being dug for a lady who died on the 22nd January 1937 seven old coins of the later Kushan kings fell from an earthen pot. These will be dealt with under the Treasure Trove Act as soon as they have been acquired by the Deputy Commissioner, Gujranwala. The *Tibba* is worth examination.

Out of the find from Mian ali Dogran, Sheikhupura District, referred to in the report for the year 1935-36 one gold and three silver coins and a terracotta disc were acquired for the Museum and the rest of the find consisting of one gold and fourteen copper coins was returned as they were too blurred for purposes of study.

United Provinces of Agra and Oudh.—Eighteen hoards of Treasure-Trove coins were discovered in the United Provinces during the year under review. They included 2,484 silver rupees, 1,135 billon coins and 2,108 copper pieces, representing the issues of Kushana rulers, Sultans of Delhi, Kings of Jaunpore, Mughal Emperors and a few others. Besides these finds which were dealt with by the Coin Committee of the Province, 68 coins were discovered at the north-west bastion of the Taj enclosure at Agra while making excavations for its repairs, a reference to which has been made under the section 'Conservation.'

Jodhpur State.—Two finds of coins were reported in the State under the Treasure Trove Act. They comprised 182 Silver coins found while digging the foundations of an old temple in Sardargarh, a patta village of Thikana Jasnagar and 330 copper coins found while digging out the root of a tree in a field in village Rajas. The former hoard consists of exclusively Gadhaya coins and the latter of various of the Delhi Sultans Ala-ud-din, Muḥammad Shāh, Qutub-ud-din, Mubarik Shāh and Ghayasuddin Tughlaq Shāh.

Bihar.—Treasure Trove consisting of Coins :—

The Collector of Shahabad reported that between 6th and 12th July 1936, certain labourers, while digging foundation of a house in Mohalla Mahadeva,

Arrah Town, recovered 172 coins of 1835 and 1840 A.D. and also 8 silver coins of Shāh 'Ālam (Murshidabad Mint) only. The latter were acquired by Government under the Treasure Trove Act. They all belong to the type illustrated in B. M. C. Pl. XXX, No. 37. Seven of these coins have been distributed to the Museums at Patna, Madras, Ajmere, Rangoon, and to the Watson Museum, Rajkot and Ravenshaw Museum, Cuttack and one was offered for sale.

2. The discovery of a hoard of 730 silver punch-marked coins at Machhuatoli, Patna, was reported last year. On cleaning the hoard was found to be of great numismatic importance and was acquired by Government. The coins are now in the Patna Museum.

3. The Collector, Champaran, sent seven copper coins found in village Radhia to the Curator, Patna Museum. They were found to be coins of Kadphises II, Kanishka and Huvishka of the Kushan dynasty.

4. In the previous report mention was made of the discovery on the 5th September 1936 of 67 copper pieces and 129 half copper pieces of the time of the Mughal King Shāh 'Ālam in village Konad, District Patna. They were acquired and distributed among some of the recognised Coin Cabinets. The coins belong to the 22nd regnal year of the king.

5. The Deputy Commissioner, Hazaribagh, sent to the Curator, Patna Museum, four silver Mughal coins out of a lot of 144, found in village Harla, P. S. Bengabad, District Hazaribagh. On the recommendation of the Curator, the whole lot, which was found to contain coins of Shāh Jahān, Aurangzeb, Shāh 'Ālam, Farrukhsiyar and Muḥammad Shāh was acquired and the coins distributed.

6. Fifty-three silver coins of the Suri dynasty were discoverd in village Niamapur, P. S. Teghra, District Monghyr, and were acquired by Government and distributed among the recognised Coin Cabinets. The hoard includes coins of Sher Shāh bearing dates ranging from the Hijri years 947 to 952, of Islām Shāh from 952 to 960 and 1 of Muḥammad Ādil Shāh dated 962.

7. The Collector of Saran reported that a pot containing 56 silver coins of Shāh 'Alam was found on the 18th October 1937 in the land belonging to Sadhu Pandey in village Basatpur while labourers were digging foundations for a house. The coins have been recommended for acquisition.

The following cases of Treasure Trove not consisting of coins were reported :—

8. The Collector of Gaya reported the discovery of five images in village Puranchak, Gaya District. At his suggestion four of them were recommended for acquisition and the fifth one was left *in situ.*

9. On 2nd August 1937 information reached the Archæological Superintendent that two sandstone pillars had been discovered in an open field in Mohalla Lohanipur belonging to Darbari Mistry of Bakarganj, Patna. The existing height of one of them was $9'\text{-}4\frac{1}{2}''$, of which the major portion was unfinished and evidently meant to remain unexposed. It was square in section, with raised band on the top, whence it had broken away. The pillar was buried about 8 ft. below the present ground level. The other pillar was nearly $1'\text{-}8''$ square in section and bore traces of polish on two sides. It is $4'\text{-}7''$ long and contained a chase, measuring $1'\text{-}4''\times 1'$ on one of its unpolished sides. These two pillars were removed to the Patna Museum.

10. Two inscribed pieces of stone slabs, measuring $25'\times 8\frac{1}{2}''\times 3''$ and $8\frac{1}{4}''\times 7''\times 3''$ were discovered inside the jail at Monghyr while digging foundation trenches for new barracks and were sent to the Patna Museum.

11. The Curator, Patna Museum, reports a find of some bronze, stone and terracotta objects of the Mauryan period unearthed during the excavation of the foundation for the Imperial Bank of India building, Patna. The find consists of two copper vessels 1′-8″ and 1′-5″ high, four stone rollers each about 8″ long, thirteen copper rings of various sizes, five copper lids, miscellaneous pieces of copper tools and eight pieces of stones of different shapes. The acquisition of the find which has been recommended by the Collector is of great importance as many of the objects bear on them symbols that are also met with on punch-marked coins.

Central Provinces and Berar.—The Times of India, Bombay, reported the discovery of 18 images of black stone at Barsi Takli, Akola District, from an earthen mound in the house of Salam Khan and Nadir Khan. The Sub-Divisional Officer, Akola, opened the case under the Treasure Trove Act, and 13 images were removed to the Central Museum, Nagpur, while the remaining ones were left with the keeper of a local Jain temple. All the images which represent individual Jain Tīrthaṅkaras were photographed by the Department. Barsi Takli was an important place in the 12th century; a long Sanskrit inscription of A.D. 1177 in the local Bhavānī temple calls the place Tekkali and mentions many princes of a collateral Yādava line (Hira Lal, *Inscriptions of C. P. and Berar*, 2nd ed., p. 149).

The following other cases were reported by the Curator, Central Museum, Nagpur :—

66 silver coins struck by the Feudatory States in the name of the Mughal Emperor Shāh ʻĀlam II were discovered at the village Nimach Khurd, Tehsil Harda, District Hoshangabad. The coins being of no numismatic value were not acquired.

34 silver coins and two *karas* of the Mughal Emperors Muḥammad Shāh and Shāh ʻĀlam II were discovered at Arhi, Taluq Kelapur, District Yeotmal. No acquisition was made as the coins were in a very bad condition.

4 gold and 346 silver coins of the Mughal Emperors were discovered at Bhambarda, Taluq Kelapur, District Yeotmal. Of these 3 gold and 169 silver coins were acquired.

2 gold and 423 silver coins of the Mughal Emperors were discovered at Mohad, Tahsil Burhanpur, District Nimar. 2 gold and 334 silver coins have been acquired.

29 silver coins of the Mughal Emperors were discovered at Mauza Bondria, Tahsil Harsud, District Nimar. 18 of these were acquired.

258 silver coins of the Feudatory States struck in the name of the Mughal Emperor Shāh ʻĀlam II were discovered at Bansi, Tahsil Lakhnadon, District Chhindwara. No acquisition was made.

2 gold and 360 silver coins of the Mughal Emperors were discovered at Jalandra, Tahsil Burhanpur, District Nimar. The gold and 210 silver coins have been acquired.

23 silver coins of the Mughal Emperors were discovered at Mauza Bhurka, District Mandla, of which 13 were melted down by the finder. 6 coins were acquired.

137 silver coins of the Mughal Emperors were discovered at Saoli, District Chanda. 96 of these were acquired.

62 silver coins of the Mughal Emperors were discovered at Zuna, Tahsil Rehli, District Saugor. 59 coins were acquired.

40 silver coins of the Mughal Emperors were discovered at Gajoli, District Chanda. 28 were acquired.

The inscribed stone slab of Bhagadatta found at Pauni, district Bhandara, has been acquired.

6 small brass images, two bells and one lamp were discovered at Salkhan, District Bilaspur. One bell and three images have been acquired.

ORISSA.—Three copper plates with Nāgari inscriptions were unearthed by one Raghunath Panda of village Krishnasaranpur, taluq Ghumsur, District Ganjam, on the 27 November 1936. On the advice of the Managing Committee, Provincial Museum, Orissa, Cuttack, they were acquired on behalf of Government and deposited in the Provincial Museum.

MADRAS PRESIDENCY.—The Superintendent, Government Museum, Madras, who deals with the Treasure-trove finds in this Presidency gives the following list in his Annual Report :—

*Coins.*

1. One gold coin of Kṛishṇa and 16 gold *paṇams* found in Kashakandigai village, Puttur taluk, Chittoor district.

2. One silver coin each of Mughal Emperors Aurangzeb and Shāh 'Ālam I found in Panangad amśam, Kurumbarnad taluk, Malabar district.

3. On 20th August 1936, a shepherd boy noticed a small metallic ball on the bund of the ditch in S. No. 628 in Meyyur village, Madurantakam taluk, Chingleput district, containing 100 ? gold *Paṇams*. He broke the ball and found in it small pieces of coins. He showed them to a man near by who took some of the coins saying that they might be bullets used for shooting. Some of the remaining coins were strewn on the ground and some were given by the finder to his aunt, who showed them, not knowing what they were, to some of her neighbours. Children were allowed to play with them, but she preserved 16 coins which were recovered by the village headman. It appears that the metallic ball contained about 100 coins of which 16 were acquired for the Madras Museum.

4. 1 Vijayanagara gold Varaha found in Padnur village, Puttur taluk and 21 silver coins of Mughal Shah Alam found in Kulai village, Mangalore taluk, South Kanara district.

5. 71 Purāṇas silver, not broken, 21 Purāṇas silver, broken, one silver weight ? bearing 'taurus' symbol and four silver weight ? pieces found in Singavaram village, hamlet of Chittiyala village, Nandigama taluk, Kistna district. The treasure comprised in addition to these silver coins, some gold articles including probably coins and a diamond weighing about 12 carats.

6. 24 gold coins unidentified (Elliot, Coins of Southern India, No. 83), and 76 gold coins also unidentified (one-fourth of above in weight) found in R. S. No. 566, public puntha, Nallajerla village, Tadepalligudem taluk, West Godavari district.

7. 16 silver coins of Alamgir and 5 of Shah Alam found from Nanjai Puliampatti village, Gobichettipalayam taluk, Coimbatore district.

8. 15 gold coins (unidentified) found in Dendulur village, Ellore taluk, West Godavari district.

9. 50 copper coins of Shah Alam II and 40 copper coins of Shah Alam II ? and 1,512 gold *Paṇams* found in Pullambakkam village, Conjeeveram taluk, Chingleput district.

10. 1 gold Varāha (British) found in Gundakkal village, Omalur taluk, Salem district.

11. Two gold coins of Delhi Sultan Alauddin and two of Mahmud II found in Yandamur village, Cocanada taluk, East Godavari district, along with a bronze vessel, three pairs of gold ear-rings, three gold rings and two gold wire-like bars.

*Finds other than coins.*

(1) Tanjore district, Tanjore taluk, Nallucherri village—

(i) Naṭéśa with *prabhā*: hands *dhakkā*, flames in a cup held in the palm, *abhaya* and *gajahasta*; *jatās* flowing sideways, showing Gaṅgā and a Nāga, skull, snakes and crescent moon; *makara* and *patrakuṇḍalas* on the ears; necklets *yajñopavīta*, flowing *uttarīya*, armlets, wristlets, waist-band, *pādasaras* and *bhringipāda;* trampling *Apasmāra* on a *bhadrāsana* with lotus petals worked on its sides. Height 100 cm. Acquired for Madras Museum.

(ii) *Sivakāmasundarī* standing on a *padmāsana* over a *bhadrāsana*; hands, *kaṭaka* and *lola;* ornaments, *karanḍamakuṭa*, *makarakuṇḍalas*, necklets, armlets, wristlets, *pādasaras* and *yajñopavīta*. Height 74·5 cm. Acquired for Madras Museum.

(2) Trichinopoly district, Kulitalai taluk, Inam Edayampatti village—

Naṭeśa with *prabhā*: There are lumps of superfluous metal sticking to the back of the image in three places. There are four more lumps come off from various parts of the back of the *prabhā*. This is an unworked image showing how it looks just after casting. Height 82 cm. Acquired for Madras Museum.

(3) South Arcot district, Kallakuruchi taluk, Alathur village—

(i) *Bālakrishna* dancing on a *padmāsana* over a *bhadrāsana* with four circular rings two on either side; the right hand is in the *abhaya* pose and the left hand stretched out; hair worked as *keśabandha* with *śiraśchakra* behind; ornaments, *makarakuṇḍalas*, necklets, armlets, bracelets, anklets, *pādasaras*, *channavīra* and waist-string with small ornamental balls strung on it. Height 54 cm. Acquired for Madras Museum.

(ii) *Sudarasana chakra* with flames on all the four sides; central circular disc shows *āyudhapurusha* in an attitude of adoration on one side and *siṁhamukha* (*kīrtimukha*) on another. Lotus petals radiate from the central disc towards the outer circular band on whose four sides are flames. The discus is supported by a pair of seated lions on a rectangular sheet above a shaft coming over a rectangular *pīṭham*. Acquired for Madras Museum.

(iii) *Rukmiṇī* standing, carrying a red lily in her left hand. Acquired for the Arts Section, Indian Museum, Calcutta.

(iv) *Satyabhāmā* standing, carrying a blue lily in her right hand. Acquired for the Arts Section, Indian Museum, Calcutta.

(v) Vishṇu standing on a circular *pīṭham* over a *bhadrāsana* with side spokes; hands, conch, discus, *abhaya* and *kaṭyavalambita*. Acquired for the Archæological Section, Indian Museum, Calcutta.

(vi) *Srī Devī* standing with her left hand in position of holding a red lotus. Acquired for the Archæological Section, Indian Museum, Calcutta.

(vii) *Bhū Devī* standing with the right hand in position of holding a blue lotus. Acquired for the Archæological Section, Indian Museum, Calcutta.

(4) Guntur district, Bapatla taluk, Alluripalem village—

*Bhū Devī* standing on a circular *pīṭham* over a *bhadrāsana* carrying a blue lotus bud in her right hand. Acquired for the Prince of Wales Museum, Bombay.

(5) Vizagapatam district, Vizianagram taluk, Parasam village—

Seven stone images including a *Kshetrapāla*. Not acquired.

(6) Kistna district, Nandigama taluk, Kandrapadu village—

A large *mukhaliṅgam,* five smaller *liṅgams* and a small image. Not acquired.

# SECTION III.—DEPARTMENTAL ROUTINE NOTES.

## MUSEUMS.

*Taxila Museum.*—During the year under review 1,100 antiquities were added to the Museum consisting of 102 metal objects, 471 terracottas and pottery, 96 stone objects, 94 shell and bone objects, 60 glass and miscellaneous objects, 232 beads and gems and 45 copper coins. The above antiquities were recovered in the excavations on the Bhir Mound and Sirkap sites at Taxila.

The collection of coins in this Museum was further enriched by the presentation of two silver coins of Zeionises (obv. king on horse back. Rev. the deity crowning the king with a wreath) by Cuthbert King, Esqr., M.A., I.C.S., Deputy Commissioner, Rawalpindi.

A relief map of the Taxila valley covering an area of about 48 square miles showing in particular the excavation sites was prepared very skilfully by the Modeller of the Indian Museum, Calcutta, during the year under report of papier-mâché. It has been installed in a glazed table show-case specially prepared for the purpose, in the central hall just in front of the entrance. The map is of great help to the visitors in seeing the relative position of the old remains and it gives a general idea of the whole valley. Its usefulness has been greatly appreciated by the visitors. Although the scale is very small, *viz.*, 8 inches to a mile, yet every effort has been made to show as many details as possible. It is complete in all respects save proper labelling which for the time being has been improvised by typed paper labels.

In addition to the above one photo-case was installed at the front porch in which the photographs and guide books, etc., for sale have been exhibited for the convenience of the visitors.

The antiquities from the deep diggings on the Bhir Mound and Sirkap sites were arranged in two different show-cases in chronological sequence of different strata. Now one can easily study the antiquities from both these sites in order of chronological sequence.

During the year under review the number of visitors to the Museum was 7,147 including 967 children and 204 students. Parties of students from the different Universities and schools and colleges in India visited and studied the antiquities in this Museum.

*Sarnath Museum.*—The rearrangement of certain exhibits was carried out at the Sarnath Museum. In Room I the Śunga railings were rearranged in a conspicuous position and the Maurya and Kushan stone inscriptions from

different galleries were assembled in a wall-case. In Room II have been arranged antiquities of the Gupta period and early mediæval period, while those belonging to the mediæval period from 9th to 12th century are displayed in Room III. A wall-case in the same room has been reserved for the display of objects connected with monastic life during those days. Three big earthen jars discovered during the excavations, which were shattered to pieces, have now been reassembled by a modeller deputed for the purpose.

*Delhi Fort Museum.*—At the Delhi Fort Museum the classification and their systematic arrangement in the cabinets of 4,940 coins was accomplished. For the sake of ready reference each of them has been provided with a paper disc containing its full description, *viz.*, number, metal, ruler's name, mint and date. The catalogue of the coins in Mr. Nelson Wright's collection prepared by the same scholar was published, and the coins received back from England have also been arranged in a cabinet.

13 miscellaneous objects and 59 coins, 3 gold, 54 silver and 2 copper have been added during the year. An inscribed slab bearing a Persian inscription, dated 965 A.H. (1558-59 A.D.), and two stone images discovered in the course of levelling and dressing the area near the Purana Qila at Delhi in connection with the anti-malarial scheme were acquired. Other antiquities comprised three manuscripts, four pieces of China-ware and three printed works, including one containing copies of treaties, enagagement or correspondence between the British Government in India and the Mughal King or his ministers published in the year 1805.

*Mohenjodaro Museum.*—It is gratifying to note that this Museum is becoming increasingly popular among students, and during the year it attracted a good number of school and college parties under the guidance of teachers for instructional purposes.

Mohenjodaro being in an out of the way place, the want of a Rest House for visitiors was very keenly felt. This has been met by setting apart the Junior Officers' Bungalow as an Archæological Rest House.

In the beginning of the year 1937 the Archæological Department transferred a few thousands of the duplicate objects from Mohenjodaro to other important Museums of India with a view to providing facilities for their study in those institutions as well. By this transfer the collections of the Imperial Museums at Calcutta and Delhi, and the Provincial Museums at Bombay, Madras, Lucknow, Patna and Nagpur were enriched and the Museum at Mohenjodaro was relieved of congestion.

The rearrangement of the objects left at Mohenjodaro has been attempted on the following lines. The two main rooms exhibit the typical specimens of outstanding interest to the general public. The duplicates forming a 'Reserve Collection' have been classified and kept on wooden racks.

Nine fresh representative sets were prepared for meeting the demands of Museums other than the important Provincial Museums mentioned above. A good collection of duplicate antiquities from Mohenjodaro have also been set apart for the Karachi Museum which has however not yet been accorded Provincial status. Thus the nomentous discoveries made at Mohenjodaro by the Archæological Department have been brought within the reach of so many institutions without lessening the great importance of the local Museum maintained near the site of excavations, where the finds can be studied amidst their natural surroundings.

Other improvements include the provision of general descriptive labels both in English and Sindhi and the renumbering of the seals and sealings where necessary, the checking of the Kushan coins from the Stupa Area, the treatment and grouping together of antiquities belonging to other pre-historic sites in Sind and the listing of all jewellery and precious objects.

## ANCIENT MONUMENTS PRESERVATION ACT AND LISTING OF MONUMENTS.

*Punjab and North-West Frontier Province.*—Only one monument was protected in the Punjab, namely, 'Ruined Qila AT HANSI DISTRICT HISSAR'.

No monument was protected in the North-West Frontier Province.

An agreement with the owners of Shah Burhan's tomb at Chiniot, District Jhang, was executed during the year under report.

The nineteen ancient *dheries* in the North-West Frontier Province mentioned in the Annual Report for the year 1935-36 could not be finally protected as their owners look upon them as a valuable source of manure for their fields. The case of protection of all the thirty-five *dheries* previously visited by Mr. M. H. Kuraishi was therefore reconsidered and it was decided that only nine of them be protected and an undertaking taken from the owners of twelve more that brick walls and antiquities recovered in course of digging for manure are not destroyed. The required undertaking having been given the twelve *dheries* were finally protected in January 1938. In addition to these three more *dheries*, *e.g.*, Sar-dheri Palatu Dheri and Sulai Dheri have also been declared protected.

In the Punjab, the Mounds at Mian Ali Dogran and Kala Shah Kaku have been protected under the Ancient Monuments Protection Act. The former is mentioned in General Cunningham's Report, Vol. II, pp. 200-202 and XIV, pp. 148, 180, 191 and 193.

Elaborate data for a composite list of all ancient sites are being collected. Reports of unauthorisd traffic in Gandhara sculptures continue to be received. Miss A. Brawsen of Memorial Hospital for women and children, Sialkot city, brought to notice that she had collected a few bits of Greco-Buddhist sculptures out of which she took two to Denmark and two pieces were with her. She was therefore advised to surrender the two antiquities in her possession noted below to the Peshawar Museum which she complied with :—

1. Standing image of Bodhisattva Maitreya, hands mutilated and lower part of face including chin and part of neck very badly damaged. Size $11\frac{3}{4}'' \times 3\frac{1}{4}''$.
2. Seated Buddha figure in dhyan-mudra with a standing haloed male divinity in adoration to its right. Size $3\frac{3}{4}'' \times 3\frac{7}{8}''$.

As regards the antiquities sent to Denmark she has been requested to supply the photographs.

The Assistant Commissioner, Mardan, reported about the recovery of an image from Takht-i-Bahi village while the owner of a house was digging up its courtyard for building a wall. The officer was advised to hand it over to the Curator, Peshawar Museum. The Statue is of a standing Buddha in abhaya-mudra 4 ft. 8 inches high (including halo and pedestal 5 ft. 9 inches) and 1 ft. 11 inches in breadth, with hair combed back: raised urna; ushnisha tied by a twisted cord and elongated ears. Top of nose, lips, upper lid of right eye and

left ear are damaged. Part of the halo is broken, right forearm is mutilated and border of the upper garment is broken in places. On front of the pedestal, between two Indo-Corinthian pilasters are traces of a seated figure which is flanked on each side by a couple of standing figures. Each of the right and left side of the pedestal is occupied by a full blown rosette of 8 petals.

*United Provinces of Agra and Oudh.*—The undermentioned monuments and sites were declared protected.

(1) Hathi Khana mosque or Jai Chandi mosque in Village Hathgaon, Tahsil Khaga, District Fatehpur.

(2) Ruined mosque in the Old Fort at Sakit, Etah District.

(3) Ancient site at Kosam near Allahabad.

(4) Ancient site at Daulatabad, Tahsil Nagina, District Bijnor.

Protection was withdrawn from the undermentioned monuments :—

(1) The Fort of Tappal, tahsil Khair in Aligarh District.

(2) Tomb of one of the sons of Alauddin at Budaun.

(3) Old mosque at Budaun.

*Bombay Presidency.*—During the year under report Notification of protection as regards Shankarling Temple at Nimbal, Taluka Indi, District Bijapur, was confirmed.

Certain sites near Nala Sopara in Bassein Taluka of the Thana District were declared protected for the purpose of an excavation.

*Bihar.*—During the year under review the following monuments were added to the List of Central Protected Monuments :—

(1) Stone images of Siva-Parvati, Simhavahini, mother and child (birth of Krishna), Vishnu and Sivalinga and various small fragmentary images (12 in number) at Datiana, near Bikram, Police Station Bikram in the Patna District.

(2) Ruins of Baradari Buildings with probable underground cells and passage, standing on a high mound on an area of about 0·23 acre of land of settlement plot No. 23 to the east side of the Juma Masjid at Hadaf Hill at Arazi Mukimpur, Police Station Rajmahal in the Santhal Parganas District.

(3) Sculptures, carvings, images, bas-reliefs, inscriptions and other like objects within the Districts of Ranchi, Hazaribagh, Palamau and Manbhum.

*Orissa.*—The ruins of Buddhist temples and images at Bandareswar; the old hill containing many valuable sculptures and images at Ratnagiri; the ruins of Buddhist temples and images at Naltigiri; the old hill containing many valuable sculptures, images and inscriptions, etc., of Buddhistic age which require protection on the Udayagiri Hill at Chandia; and the ruined fortress demarcated by a moat at Agrahat, Jaj Bhairab, Kedareswar; Mundmal, Chauduar, Kapaleswár, Chhatisa (thana No. 139), Bandels and Govind Jew Patna, all in the Cuttack District have been declared protected.

*Central Provinces and Berar.*—The following monuments were declared protected :—

(1) Patalesvara Mahadeva temple including all ancient remains of other temples close by, together with various sculpture of Brahmanical, Buddhist and Jain pantheons, and inscriptions, carved and uncarved stones discovered in Khasra Nos. 488 and 489 at Mallar in the Bilaspur District.

(2) Standing Jain image of the Digambar Sect known by its common name "Nagababa" and the various fragmentary stone images and architectural stone pieces placed in open waste land in Khasra No. 83 near Ghansore in the Chhindwara District.

(3) Ancient temple standing in Khasra No. 148 area 0·36 acre, recorded as waste land with 25 feet space all round it at Deotak in the Chanda District.

*Bengal.*—The area situated between the road to Amlajore and the river Damodar in the village Nadiha, Police Station Faridpur, District Burdwan, comprising plots Nos. 823, 836, 841 and 872 was declared to be a protected area under Section 20 of the A. M. P. Act. A fresh notification was issued defining the exact limits of the protected area in the Fort mounds at Bangarh in the District of Dinajpur.

*Madras Presidency.*—Only one monument namely Kapotesvara temple with five inscribed slabs at Chejerla in Narasaraopet taluk, Guntur district, was declared protected.

The transfer of Fort St. Angelo, Cannanore to the Archæological Department was sanctioned by the Government of India, in the Defence Department, free of cost, on condition that this Department would have no objection to the use of the Central Buildings in the Fort as an Officer's Mess by the Indian Territorial Force Unit that may be located there and to the erection of tents for the accommodation of officers within the Fort provided the cost of repairs, if any, necessitated thereby is met by the unit and the public are not obstructed from inspecting the fort during the period of Annual Training.

## PUBLICATIONS.

The following publications were issued by the Department during the year 1937-38 :—

1. *A guide to the Sculptures in the Indian Museum*, Calcutta Part I. Early Indian Schools by N. G. Majumdar.
2. *List of Archæological Photo-negatives* stored in the Office of the Director General of Archæology in India, corrected up to 31st March 1935, Parts I-II.
3. New Imperial Series Vol. LIV—*South Indian Inscriptions* (*Texts*) Vol. VIII—Miscellaneous Inscriptions from the Tamil, Telugu and Kannada countries by K. V. Subrahmanya Aiyer.
4. *The Coinage and Meteorology of the Sultans of Delhi*, incorporating a catalogue of the coins in the author's Cabinet, now in the Delhi Museum by H. Nelson Wright.
5. *A Guide to Sarnath* by B. Majumdar with an introduction by Rao Bahadur K. N. Dikshit.
6. Memoir No. 52—*A Memoir on Kotla Feroz Shah, Delhi*, with a translation of Sirat-i-Feroz Shahi by J. A. Page and M. H. Kuraishi.
7. *Annual Report of the Archæological Survey of India* (1934-35) by J. F. Blakiston.
8. *A guide to the Sculptures in the Indian Museum, Calcutta* Part II—The Greco-Buddhist School of Gandhara by N. C. Majumdar.
9. *An Historical guide to the Agra Fort* (based on contemporary records) by Muhammad Ashraf Hussain.

10. *A guide to Fatehpur Sikri* by Muhammad Ashraf Hussain.
11. *Annual Report on the South Indian Epigraphy* for the year ending 31st March 1934 by C. R. Krishnamacharlu.
12. *Guide to the Buildings and gardens in Delhi Fort.* New Edition of 1937.
13. Memoir No. 56—*The Ananda Temple at Pagan* by Chas. Duroiselle.
14 *Epigraphia Indica* edited by Dr. N. P. Chakravarti, Vol. XXIII, Parts I-IV.
15. *Epigraphia Indo-Moslemica* edited by G. Yazdani, Supplement to the issue of 1933-34—Inscriptions from the Bombay Presidency by Dr. M. Nazim.

## PHOTOGRAPHS.

*Office of the Director General of Archæology.*—During the year 445 negatives were prepared. Of these, 14 relate to the site and antiquities at Kashipur, District Nainital, 36 to antiquities found at Mohenjo-daro, 91 to finds from Sardheri, 13 relate to sculptures preserved in the Curzon Museum of Archæology at Muttra, 229 to the excavation and antiquities at Taxila and the rest to miscellaneous items.

Of the 1,866 prints made during the year, 445 were pasted in the office albums, 462 used for departmental requirements in India and abroad, 134 nicely mounted and presented to the Muttra Museum, 237 presented to Indore Museum and 255 supplied to the Archæological Museum at Taxila for record. The rest 333 were sold to the public on payment. The sum of Rs. 775-14-11, realised as sale-proceeds was deposited in the Government Treasury.

1,729 prints were received from Provincial offices and mounted in the albums.

*Frontier Circle.*—Altogether 275 photographic negatives were prepared in this circle. Of these, 96 negative relate to sites and antiquities of Theh Polar and Harappa and the rest mainly to conservation work in Kangra, Baijnath, Kotla, Lahore, Taxila, Panipat, Shahdara and Shalamar.

Prints worth Rs. 50-4 were sold to the public and 33 prints were supplied to the officers of the Department free of charge. In addition to these, three sets of the previous years photographs were printed.

*Northern Circle.*—The total number of negatives exposed and photo-prints prepared during the year was 109 and 683 respectively. Of the prints 620 were supplied free of charge to Archæological officers and the remaining 54 sold to public for Rs. 56.

*Western Circle.*—310 photo-negatives and 1,027 photo-prints were prepared in the Western Circle during the year. Of the latter, 394 were supplied to the Director General of Archæology in India, 126 to the officers of the Archæological and other Government Departments and 85 prints were sold to the public for the total value of Rs. 111-5-0.

*Central Circle.*—406 negatives were prepared. 16 of these relate to mounds and antiquities of the Azamgarh District, U. P. and 10 to the temples at Mukhalingam, District Vizagapatam, Madras Presidency.

Of the 1,492 prints prepared during the year 424 were supplied to the Director General of Archæology in India and 144 more for departmental purposes; 424 were mounted in office albums and the same number was put in touring envelopes; 76 were supplied to the public for the sum of Rs. 27-12.

*Eastern Circle.*—127 negatives were taken during the year, of which 27 relate to the excavations carried out in Bengal, 62 to the ancient sites and monuments in Bengal and 38 to the ancient monuments in Assam. 120 photographs were sold to the public.

*Southern Circle.*—220 negatives were recorded. Of these, 128 relate to ancient temples and protected monuments; 74 to general views of excavated ancient Buddhist sites and the antiquities recovered from Amaravati and Nagarjunikonda; 6 to inscriptions; 4 represent general views of ancient sites and 3 of paintings; 3 are of fragments of ancient bricks, bones, etc., found at Pullavamedu at Conjeeveram and 2 are of cannons of Adilshahi time. Of the total of 1,086 prints made during the year, 304 were supplied to the Director General of Archæology in India, 30 were required for the use of the departmental officers and 639 were mounted in the office albums. 113 prints were sold to the public and a sum of Rs. 124-12-0 realised.

## DRAWINGS AND SURVEYS.

*Office of the Director General of Archæology.*—2 plans of the ancient site and excavations at Khokra Kot, District Rohtak, Punjab, and sketch maps of sites in ancient Gandhara, District Mardan, North West Frontier Province, were prepared. Among the miscellaneous drawings a revised coloured plan of the Qutb was prepared after Mr. J. A. Page for illustrating a new edition of the Guide to Qutb. Unimportant drawings which accumulated since a long time were weeded out. Drawings from Circle offices were returned to the respective Circles and a thorough survey of the documents made with a view to preparing a card index.

*Frontier Circle.*—During the year under review 22 drawings were prepared. Of these, 12 relate to Harappa, 1 to Theh Polar, 2 to Khokra Kot, 1 to Agroha Mound, 1 to Hasan Abdal, 1 to Kamran's Baradari, 2 to Hazuri Bagh, 1 to Lahore Fort and one to the office building at Lahore.

*Northern Circle.*—Twenty-six new drawings were prepared during the year. They consisted of working drawing in connection with conservation measures and sketches and plans of the ancient sites surveyed or excavated.

*Western Circle.*—58 working plans relating to conservation works were prepared during the year 1937-38.

*Central Circle.*—Besides the preparation of tracings of the site maps of Nalanda and Rajgir for the respective guide books, tracings of the proposed shed for stucco images at Nalanda, tracings for conservation works at Rajgir, drawings of the proposed additions to the rest house at Nalanda, and of the portion of the newly excavated remains of Maniar Math at Rajgir, three new drawings of the Nalanda excavations—two in ink and one in pencil—were prepared during the year.

In all, impressions of 36 inscriptions were taken. Of these 10 were discovered at Nalanda and 2 at Rajgir. The following inscriptions, though known before, were also copied namely, one at Silao in the Patna District; one at Udaigiri in the Cuttack District; one at Ramnagar in the Mandla District; eleven at Damoh; one at Malhar in the Bilaspur District; one at Deorbijia in the Drug District, three in the Baudh State; and five in the Kawardha State.

*Eastern Circle.*—Six new drawings of the excavated sites at Kosam and Bhita in the District of Allahabad and at Durgapur in the District of Burdwan were

prepared during the year. Besides, three more drawings pertaining to the partly exposed ruins at Nandangarh in the District of Champaran and Mahanad in the District of Hooghly were made.

*Southern Circle.*—Besides 25 sketches and tracings required for conservation work, two record drawings, (1) Temporary Archæological Museum shed at Amaravati, Guntur district, and (2) Type design for fixing enamelled steel Notice Boards to protected ancient monuments, were prepared during the year.

## PERSONNEL.

Mr. M. S. Vats continued as Deputy Director General of Archæology except for a short period of 27 days, when on account of illness he had to go on leave on average pay from 27th September to 23rd October 1937. Mr. J. H. S. Waddington was appointed Assistant Superintendent, Archæological Survey, with effect from the 17th July 1937 and held charge of the Central India and Rajputana Circle. Mr. C. C. Das Gupta, M.A., was appointed as Assistant Superintendent and was attached to Director General's office with effect from the forenoon of the 3rd January 1938.

Khan Bahadur Maulvi Zafar Hasan continued to hold charge of the Northern Circle throughout the year except for a short period of 13 days from the 30th August 1937 to 11th September 1937, when Dr. K. A. A. Ansari, the Assistant Engineer, took over the current duties of the office of the Superintendent, Archæological Survey, Northern Circle, in addition to his own. The latter officer also took leave for 19 days with effect from the 2nd August, 1937. Mr. H. L. Srivastava continued to hold charge of the Frontier Circle during the year.

Mr. G. C. Chandra and Dr. M. Nazim continued to hold their respective posts as Superintendent and Assistant Superintendent of the Central Circle till the afternoon of the 2nd July, 1937, when Mr. Chandra was transferred to Madras as Superintendent of the Southern Circle and Dr. Nazim took over charge of the Central Circle and continued to officiate. Mr. A. Ghosh, M.A., was appointed as Assistant Superintendent in this Circle with effect from the forenoon of the 7th July 1937, and continued to hold that office throughout the year.

Mr. Q. M. Moneer, Assistant Superintendent, had taken over charge of the Western Circle in addition to his own duties from Mr. Madho Sarup Vats on 10th March 1937. He was relieved of the additional charge on 21st July 1937 by Mr. H. H. Khan who was transferred from the Southern Circle. Mr. Q. M. Moneer proceeded on four months leave on average pay from the afternoon of 18th March, 1938.

Mr. T. N. Ramachandran was confirmed as Assistant Superintendent, Eastern Circle, with effect from the 21st November 1937. Mr. N. G. Majumdar continued to be in charge of the Archæological Section, Indian Museum and the Eastern Circle, Calcutta, throughout the year.

Mr. H. H. Khan handed over charge of the Southern Circle to Mr. G. C. Chandra on the 12th July 1937.

Khan Bahadur Muhammad Sana Ullah held charge of the office of the Archæological Chemist in India throughout the year.

There was no change in the Epigraphical Branch. Drs. N. P. Chakravarti and B. C. Chhabra and Mr. C. R. Krishnamacharlu continued to hold charge of their respective offices throughout the year.

Dr. M. A. Hamid, Curator of the Central Asian Antiquities Museum, New Delhi, continued in his charge throughout the year.

# APPENDIX I.

## LIST OF EXHIBITS OTHER THAN COINS ACQUIRED FOR THE INDIAN MUSEUM, ARCHÆOLOGICAL SECTION, DURING THE YEAR 1937-38.

| Museum Register No. | Description. |
|---|---|
| | **Purchased from Puri and presented by Dr. B. C. Law.** |
| 10999. | South Indian Ivory sculpture which formed part of a shrine, showing a king on horseback followed by a hunting party. 1′ 2·5″×4″. It is in the style of the Nāyaka period and may date from the early 17th century A.D. |
| | **Treasure trove.** |
| | *From Sonallur, Chingleput District.* |
| 10995. | Bronze image of Vishṇu. Ht. 7½″. |
| 10996. | Do. Bhūdevī. Ht. 5¾″. |
| 10997. | Do. Śrīdevī. Ht. 5¾″. |
| | *From Alathur, Kallakurichi Taluk, South Arcot District.* |
| 11004. | Bronze image of Vishṇu. Ht. 1′ 4″. |
| 11005. | Do. Bhūdevī. Ht. 1′ 1″. |
| 11006. | Do. Śrīdevī. Ht. 1′ 1″. |
| | *From Bangarh, Dinajpur District.* |
| 10998. | Stone image of Sadāśiva, ten-armed; inscription of three lines on pedestal. 4′ 1″×1′ 8″. |
| | **Received in exchange from the Madras Museum.** |
| 11000. | Bronze image of Naṭarāja. 3′ 4″×halo 2′ 8½″. |
| 11001. | Do. Somāskanda. 1′ 10″×2′ 6″. |
| 11002. | Inscribed votive *stūpa* of bronze. 9¼″×3½″×4″. |
| | **Purchased.** |
| 11003. | A set of 7 copper-plates of Vīra-Rājendra Choḻa. From Charala, Punganur Taluk, Chittor District, 9¼″×4½″. |
| | *From Kosam, Allahabad District.* |
| 11008. | Terracotta seal. 1⅛″×1⅛″. |
| 11010. | Fragment of terracotta sculpture with the figure of an elephant in high relief. 2¾″×2¼″. |
| 11011. | Stone beads and other tiny objects. |
| 11012. | Fragments of copper. |
| | **On loan from the Director General of Archæology in India.** |
| | *From Mohenjodaro.* |
| 10376-10381, 10384. | Steatite seals. From ·65″×·35″ to 1·15″ sq. |
| 10382. | Faience seal. ·65″ sq. |
| 10383. | Soap-stone seal. ·9″×·4″. |
| 10385-90. | Sealings—faience, paste and terracotta. |
| 10391-92. | Copper tablets. |
| 10393. | Stone figure of a taurelephantus. Ht. 8·4″. |
| 10394-10417. | Chert weights. |

LIST OF EXHIBITS OTHER THAN COINS ACQUIRED FOR THE INDIAN MUSEUM, ARCHÆOLOGICAL SECTION, DURING THE YEAR 1937-38.—*contd.*

| Museum Register No. | Description. |
|---|---|
| | ON LOAN FORM THE DIRECTOR GENERAL OF ARCHÆOLOGY IN INDIA.—*contd.* |
| | *From Mohenjodaro.*—contd. |
| 10418. | Large cone-shaped stone weight. |
| 10419-10441. | Flakes. |
| 10442-43. | Chert objects. |
| 10444-54. | Stone balls. |
| 10455-57. | Milling stones. |
| 10458-60. | Stone mace-heads. From 2·25″ to 3·95″ Dm. |
| 10461. | Alabaster objects, perforated. |
| 10462. | Mill stone, unfinished. |
| 10463. | Curry stone. 1′ 6·6″×10·7″. |
| 10464. | Milling rod. 7·7″. |
| 10465. | Pillar base (?). |
| 10466. | Brick-shaped stone slab for drain covering. |
| 10467-68. | Stone bracelets. |
| 10469-74. | Chert cores. |
| 10475-78. | Fragments of alabaster plates. |
| 10479. | Fragment of alabaster vase. |
| 10480. | Fragment of alabaster bracelet. |
| 10481-82. | Alabaster rings. Dm. 1″, 1·2″. |
| 10483. | Gamesman, buff stone. Ht. 1″. |
| 10484. | Gamesman, purplish grey stone. Ht. 1″. |
| 10485. | Stone spindle whorl but no axis-hole ; perhaps a toy. |
| 10486-96. | Fragments of bracelets of faience. |
| 10497-10504. | Fragments of faience vessels. |
| 10505-06. | Fragments of faience jar cover. |
| 10507. | Ribbed piece of faience. 1·5″×·6″. |
| 10508. | Faience nose stud. |
| 10509. | Do. button. |
| 10510. | Do. ball. |
| 10511-12. | Do. gamesman. |
| 10513-15. | Copper axes. 7·1″×2·7″, 7″×1·8″, 4·3″×2·4″. |
| 10516-17. | Do. lance-heads. 3·1″×1·2″, 8″×3·3″. |
| 10518. | Do. fragment of large lance-head. 6·7″×3·5″. |
| 10519. | Do. dagger. 7·15″×1·9″. |
| 10520. | Do. top part of dagger. 3·1″×1·3″. |
| 10521-23. | Do. barbed arrow-heads. 1·3″, ·95″, 1·4″. |
| 10524-25. | Do. fish hooks. 1·75″, 1″. |
| 10526-28. | Do. bracelets. |
| 10529-35. | Do. finger rings. Dm. ·5″ to ·9″. |
| 10536-38. | Do. chisels. 8·4″×·65″, 1·2″×·5″, 4·8″×·15″. |
| 10539-41. | Do. awls. 2·8″, 4·1″, 3·3″. |
| 10542. | Do. fragment. |
| 10543-45. | Awls of bone. |
| 10547. | Bone dice. |
| 10546, 10548. | Casting sticks—ivory (?). |
| 10549-50. | Conch shells. |
| 10551. | Fan shaped shell. |
| 10552-53, 10555. | Mussels. |

LIST OF EXHIBITS OTHER THAN COINS ACQUIRED FOR THE INDIAN MUSEUM, ARCHÆOLOGICAL SECTION, DURING THE YEAR 1937-38.—*contd.*

| Museum Register No. | Description. |
|---|---|
| | ON LOAN FROM THE DIRECTOR GENERAL OF ARCHÆOLOGY IN INDIA.—*contd.* |
| | *From Mohenjodaro.*—contd. |
| 10554. | Unfinished conch ladle. 7·5″×6·6″. |
| 10556. | Inside of conch showing ladle cut away. |
| 10557. | Almost finished segment of conch. |
| 10558-60. | Conch ladles. |
| 10561. | Worked conch shell. 3·4″×2·1″. |
| 10562-66. | Dome shaped circular objects of conch. 2″×1·2″ to 2·5″×1·4″. |
| 10567-70, 10641. | Flat circular pieces of shell. Dm. ·55″ to 1·4″. |
| 10571. | *Ḍamaru*-shaped pieces of shell. |
| 10572. | Circular piece of shell with a hole in the centre. Dm. 1·5″. |
| 10573. | Shell Chessman. ·7″. |
| 10574, 10576-80. | Shell inlay pieces, some perforated. |
| 10581-84. | Do. bracelets and fragments. |
| 10585. | Do. finger ring. |
| 10586-74. | Carnelian beads. |
| 10595-98. | Steatite beads. |
| 10599-601. | Do. spacers. |
| 10602-14. | Stone beads. |
| 10615-17. | Black stone pendants. |
| 10618-22. | Shell beads. |
| 10623-33. | Beads of steatite and faience. |
| 10634-36. | Faience spacers. |
| 10637-40. | Copper beads and a spacer. |
| 10642. | A quantity of barley and wheat grains. |
| 10643-49. | Potsherd, palm-tree *motif.* |
| 10650. | Do. fish-scale pattern. |
| 10651-55. | Do. intersecting circles pattern. |
| 10656. | Do. white slip. |
| 10657. | Do. pink slip. |
| 10658. | Do. reserved slip ware. |
| 10659-61. | Do. red wash, black paint. |
| 10662. | Do. painted inside. |
| 10663-65. | Do. red wash, black stripes. |
| 10666. | Do. white slip, black stripes. |
| 10667. | Do. fragment of dish. |
| 10668. | Do. fragment of deep plate. |
| 10669. | Do. incised decoration. |
| 10670. | Do. fragment of a plain large dish. |
| 10671. | Terracotta top of a stand. |
| 10672. | Do. fragment of platter. |
| 10673. | Do. top of an offering stand. |
| 10674-76. | Do. fragments of flat plate. |
| 10677-78. | Potsherd, grey ware. |
| 10679. | Terracotta low offering stand. Ht. 4·9″. |
| 10680-82. | Do. broad mouthed bowl, red wash. Ht. 4·4″. |
| 10683. | Do. flat vase, small neck. Ht. 2·8″. |
| 10684. | Do. pitcher shaped jar. Ht. 3·9″. |
| 10685. | Do. broad bellied low vase. Ht. 2·4″. |

LIST OF EXHIBITS OTHER THAN COINS ACQUIRED FOR THE INDIAN MUSEUM, ARCHÆOLOGICAL SECTION, DURING THE YEAR 1937-38.—*contd.*

| Museum Register No. | Description. |
|---|---|
| | ON LOAN FROM THE DIRECTOR GENERAL OF ARCHÆOLOGY IN INDIA.—*contd.* |
| | *From Mohenjodaro.*—contd. |
| 10686. | Terracotta fragment of small *hāndi.* |
| 10687. | Do. fragment of bowl, red wash. |
| 10688-91. | Do. vase, small mouth, red wash. Ht. 3·5″, 3·1″, 2·6″, 2·6″. |
| 10692-94. | Do. vase with bulging belly. Ht. 2·1″, 2·6″, 1·9″. |
| 10695. | Do. miniature vase with red wash. Ht. 1·9″. |
| 10696. | Do. vase with high neck. Ht. 1·4″. |
| 10697-705, 10721-22, 10753, 10759. | Do. miniature vases. Ht. from 1·2″ to 2·5″. |
| 10706-07. | Do. bottom of stand. |
| 10708-12. | Do. flower vase type. |
| 10713, 10715-20. 10761-64, 10780, | Do. pitchers. Ht. from 1·1″ to 8·25″. |
| 10714. | Do. vase, white slip. Ht. 7·7″. |
| 10723-29. | Do. small jars. Ht. from 3·8″ to 4·6″. |
| 10730-52, 10778. | Do. tumblers. Ht. from 1·5″ to 5·3″. |
| 10754-58. | Do. slender vases. Ht. from 3·8″ to 6·2″. |
| 10760. | Do. jug. Ht. 2″. |
| 10765-66. | Do. *hāndi.* Ht. 1″, 2·3″. |
| 10767. | Do. cup, handmade. Ht. 3·4″. |
| 10768. | Do. broad mouthed open cup. Ht. 2·5″. |
| 10769. | Do. cup or lamp with handle. Ht. 2·6″. |
| 1770. | Do. ring stand. Dm. 4·2″×ht. 2·5″. |
| 10771, 10774-5, 10782, 10804-18, 10820, 10823, 10826. | Do. jar covers. |
| 10772. | Do. narrow necked vase. Ht. 2·7″. |
| 10773. | Do. broad mouthed cup. Ht. 2·4″. |
| 10776. | Do. fragment. |
| 10777. | Do. cup on foot. Ht. 1·6″. |
| 10779. | Do. fragment of ribbed bowl. |
| 10781. | Do. bottom portion of large jar. |
| 10783. | Do. fragment of stand. |
| 10784-89. | Do. perforated vessels and fragments. |
| 10790. | Do. small cup-like vessel. Ht. 1·5″. |
| 10791-10803. | Do. plates. Dm. from 3·3″ to 7·4″. |
| 10819. | Do. base of cup. |
| 10821-22, 10824. | Do. part of stand. |
| 10825, 10933. | Do. spindle whorls. |
| 10827. | Do. saucer-shaped plate. Dm. 4·5″. |
| 10828-39. | Do. triangular 'cake' greatest, l from 2·5″ to 5·3″. |
| 10840. | Do. round shape. |
| 10841-43. | Lumps of baked clay. |
| 10844-46. | Terracotta cones. |
| 10847. | Do. armlet. |
| 10848-70. | Do. bracelets. |
| 10871-82. | Do. wheels for toy carts. |

## LIST OF EXHIBITS OTHER THAN COINS ACQUIRED FOR THE INDIAN MUSEUM, ARCHÆOLOGICAL SECTION, DURING THE YEAR 1937-38—*concld.*

| Museum Register No. | Description. |
|---|---|
| | ON LOAN FROM THE DIRECTOR GENERAL OF ARCHÆOLOGY IN INDIA—*concld.* |
| | *From Mohenjodaro*—concld. |
| 10883-84. | Terracotta human figures. Ht. 4·7″, 3·2″. |
| 10885-87. | Do. figures of mother-goddess. |
| 10888-89, 10891, 10899-905, 10908. | Do. buffalo. |
| 10892. | Do. head of buffalo. |
| 10890, 10906, 10921. | Do. rhinoceros. |
| 10898. | Do. head of rhinoceros. |
| 10893-97. | Do. man-bull, legs missing. |
| 10907. | Do. deer. |
| 10909-19. | Do. bull. |
| 10920. | Do. head of bull. |
| 10922. | Do. hare. |
| 10923. | Do. androgynic symbol. |
| 10924-25. | Do. dove. |
| 10926-27. | Do. hen. |
| 10928. | Do. bird. |
| 10929. | Do. pigeon. |
| 10930. | Do. cock. |
| 10931. | Do. head of bird. |
| 10932. | Do. flat disc. |
| 10934-61, 10963-72. | Do. beads. |
| 10962. | Do. rattle. |
| 10973-78. | Do. gamesman. |
| 10979-81. | Do. pitcher. Ht. from 11·5″ to 1′ 6·5″. |
| 10982-83. | Do. storage jars. Ht. 2′ 3″, 2′ 2″. |
| 10984. | Do. storage bowl. Ht. 1′ 9″. |
| 10985. | Do. storage jar, red wash, black paint. Ht. 2′ 1″. |
| 10986. | Do. storage jar, red wash, black stripes. Ht. 2′ 7″. |
| 10987-93. | Bricks 10″×5″ to 15·5″×8″. |
| | *From Kosam, Allahabad District.* |
| 11007. | Stone umbrella staff inscription of the reign of Mahārāja Vaiśravaṇa, the year 107. 3′ 9″×9″. |
| | *From Manjhi Fort, Saran District, Bihar.* |
| 10994. | Brick with inscription '*Śrī Prathamāditya*', 1′ $1\frac{1}{2}$″×$8\frac{1}{2}$″×$2\frac{1}{2}$″. |

# LIST OF COINS ACQUIRED FOR THE INDIAN MUSEUM, ARCHÆOLOGICAL SECTION, DURING THE YEAR 1937-38.

*Non-Muhammadan.*

| Serial No. | Ruler's name. | Class or Dynasty. | Gold. | Silver. | Bullion. | Copper. | Total. | Mode of acquisition. |
|---|---|---|---|---|---|---|---|---|
| 1 | | Punch-marked | .. | 8 | .. | .. | 8 | Presented by Rao's Circus Trading Co., Madras. |
| 2 | | Do. | .. | .. | .. | 1 | 1 | On loan from D. G. A. |
| 3 | | Do. | .. | 38 | .. | .. | 38 | Purchased. |
| 4 | | Ancient Cast | .. | .. | .. | 1 | 1 | On loan from D. G. A. |
| 5 | | Do. | .. | .. | .. | 2 | 2 | Ditto. |
| 6 | | Do. | .. | .. | .. | 1 | 1 | Presented by Mr. A. Ghosh of Archl. Survey. |
| 7 | | Do. | .. | .. | .. | 13 | 13 | On loan from D. G. A. |
| 8 | Indramitra | Panchala | .. | .. | .. | 4 | 4 | Presented by Mr. B. N. Prasad of Bareilly. |
| 9 | Vijaya Mitra | Ayodhya | .. | .. | .. | 2 | 2 | On loan from D. G. A. |
| 10 | Apollodotos | Indo-Greek | .. | .. | .. | 2 | 2 | Ditto. |
| 11 | Hippostratos | Do. | .. | .. | .. | 1 | 1 | Ditto. |
| 12 | Hermaios | Do. | .. | .. | .. | 5 | 5 | Ditto. |
| 13 | Maues | Saka-Palhava | .. | .. | .. | 3 | 3 | Ditto. |
| 14 | Azes | Do. | .. | .. | .. | 9 | 9 | Ditto. |
| 15 | Aspavarma | Do. | .. | .. | .. | 1 | 1 | Ditto. |
| 16 | Sassan | Do. | .. | .. | .. | 1 | 1 | Ditto. |
| 17 | Sapedanes | Do. | .. | .. | .. | 1 | 1 | Ditto. |
| 18 | Satavastra | Do. | .. | .. | .. | 1 | 1 | Ditto. |
| 19 | Idharasa | Do. | .. | .. | .. | 2 | 2 | Ditto. |
| 20 | | Kushan | .. | .. | .. | 2 | 2 | Presented by Pandit Vinayaka Misra. |
| 21 | Kadaphes | Do. | .. | .. | .. | 7 | 7 | On loan from D. G. A. |
| 22 | Huvishka | Do. | .. | .. | .. | 1 | 1 | Ditto. |
| 23 | | Late Kidara Kushan | 2 | .. | .. | .. | 2 | Ditto. |
| 24 | | Indo-Sassanian | .. | .. | .. | 2 | 2 | Ditto. |
| 25 | | White Hun | .. | 2 | .. | .. | 2 | Ditto. |
| | | TOTAL | 2 | 48 | .. | 62 | 112 | |

*Muhammadan.*

| Serial No. | Ruler's name. | Class or Dynasty. | Gold. | Silver. | Bullion. | Copper. | Total. | Mode of acquisition. |
|---|---|---|---|---|---|---|---|---|
| 1 | Sikandar Lodi | Sultan of Delhi | .. | .. | .. | 4 | 4 | Presented by U. P. Govt. |
| 2 | Mahmud bin Muhammad. | Bahmani | .. | .. | .. | 1 | 1 | Presented by Director of Industries, C. P. |
| 3 | Kalimulla Shah | Do. | .. | .. | .. | 1 | 1 | Ditto. |
| 4 | Husain Shah | Jaunpur | .. | .. | .. | 5 | 5 | Presented by U. P. Govt., Lucknow. |
| 5 | Muzaffar II | Gujarat | .. | .. | .. | 5 | 5 | Presented by B. B. Royal Asiatic Society. |
| 6 | Ahmad Shah I | Do. | .. | .. | .. | 1 | 1 | Ditto. |
| 7 | Bahadur Shah | Do. | .. | .. | .. | 9 | 9 | Ditto. |
| 8 | Akbar | Mughal | .. | .. | .. | 1 | 1 | Ditto. |
| 9 | Aurangzeb | Do. | .. | 11 | .. | .. | 11 | Ditto. |
| 10 | Do. | Do. | .. | 8 | .. | .. | 8 | Presented by Director of Industries, C. P., Nagpur. |
| 11 | Farrukhsiyar | Do. | .. | 2 | .. | .. | 2 | Presented by B. B. Royal Asiatic Society. |
| 12 | Do. | Do. | .. | 2 | .. | .. | 2 | Presented by U. P. Govt. |
| 13 | Do. | Do. | .. | 1 | .. | .. | 1 | Presented by Bihar Govt. |
| 14 | Muhammad Shah | Do. | .. | 5 | .. | .. | 5 | Presented by B. B. Royal Asiatic Society. |
| 15 | Do. | Do. | .. | 1 | .. | .. | 1 | Presented by U. P. Govt. |
| 16 | Ahmad Shah | Do. | .. | 2 | .. | .. | 2 | Presented by Punjab Govt. |
| 17 | Alamgir II | Do. | .. | 1 | .. | .. | 1 | Ditto. |
| 18 | Shah Alam II | Do. | .. | 2 | .. | .. | 2 | Presented by U. P. Govt. |
| 19 | Ahmad Shah | Durrani | .. | 2 | .. | .. | 2 | Ditto. |
| 20 | Bajirao II | Peshwa | .. | 6 | .. | .. | 6 | Presented by B. B. Royal Asiatic Society. |
| 21 | Anand Rao | Baroda | .. | 8 | .. | .. | 8 | Ditto. |
| 22 | Sayaji Rao II | Do. | .. | 3 | .. | .. | 3 | Ditto. |
| 23 | Ek-Pai-Sikka | E. I. Coy. | .. | .. | .. | 1 | 1 | Presented by Superintendent, Archl. Survey, Central Circle. |
| | | TOTAL | .. | 54 | .. | 28 | 82 | |
| | | GRAND TOTAL | 2 | 102 | .. | 90 | 194 | |

# LIST OF COINS RECEIVED IN THE DELHI FORT MUSEUM OF ARCHÆOLOGY DURING THE YEAR ENDING THE 31ST MARCH 1938.

| Ruler's Name. | Dynasty. | Gold. | Silver. | Copper. | Total. |
|---|---|---|---|---|---|
| *Presented by the Director of Industries, C. P. Nagpur.* | | | | | |
| Shahjahan | Mughal | .. | 1 | .. | 1 |
| Aurangzeb | Do. | .. | 3 | .. | 3 |
| Mahmud bin Md. Shah | Bahmani | .. | .. | 1 | 1 |
| Kalim Ullah bin Md. Shah | Do. | .. | .. | 1 | 1 |
| TOTAL | .. | .. | 4 | 2 | 6 |
| *Presented by the Bombay Branch Royal Asiatic Society, Bombay.* | | | | | |
| Aurangzeb | Mughal | .. | 13 | .. | 13 |
| Mohd. Shah | Do. | .. | 4 | .. | 4 |
| Ahmad Shah | Do. | .. | 1 | .. | 1 |
| Alamgir II | Do. | .. | 2 | .. | 2 |
| Shah Alam II | Do. | .. | 3 | .. | 3 |
| TOTAL | .. | .. | 23 | .. | 23 |
| *Presented by the Government of the United Provinces.* | | | | | |
| Muhammad Shah | Mughal | .. | 2 | .. | 2 |
| Alamgir II | Do. | .. | 1 | .. | 1 |
| Shah Alam II | Do. | .. | 10 | .. | 10 |
| Ahmad Shah Durrani | Durrani | .. | 2 | .. | 2 |
| TOTAL | .. | .. | 15 | .. | 15 |
| *Presented by the Bihar Coin Committee, Patna.* | | | | | |
| Muhammad Shah | Mughal | .. | 1 | .. | 1 |
| Alamgir II | Do. | .. | 1 | .. | 1 |
| TOTAL | .. | .. | 2 | .. | 2 |
| *Presented by the Government of the Punjab.* | | | | | |
| Muhammad Shah | Mughal | .. | 4 | .. | 4 |
| Ahmad Shah | Do. | .. | 4 | .. | 4 |
| Alamgir II | Do. | .. | 2 | .. | 2 |
| TOTAL | .. | .. | 10 | .. | 10 |
| *On loan from the Director General of Archæology in India.* | | | | | |
| Muhammad bin Tughlaq (struck in memory of his father). | Tughlaq | 2 | .. | .. | 2 |
| Muhammad bin Tughlaq (struck in the name of Al Hakim II). | Do. | 1 | .. | .. | 1 |
| TOTAL | .. | 3 | .. | .. | 3 |
| GRAND TOTAL | .. | 3 | 45 | 2 | 59 |

# APPENDIX II.

## ADDITIONS TO DEPARTMENTAL LIBRARIES.

| Name of office. | Books purchased. | Books presented. | Total Remarks. |
|---|---|---|---|
| 1. Director General | 254 | 91 | 345 |
| 2. Central Asian Antiquities Museum | 5 | .. | 5 |
| 3. Frontier Circle | 27 | 35 | 62 |
| 4. Northern Circle | 10 | 35 | 45 |
| 5. Western Circle | 12 | 23 | 35 |
| 6. Central Circle | 35 | 32 | 67 |
| 7. Eastern Circle | 2 | 23 | 25 |
| 8. Southern Circle | 25 | 29 | 54 |
| 9. Archæological Chemist | 9 | 19 | 28 |
| 10. Archæological Section Indian Museum | 22 | 31 | 53 |
| 11. Government Epigraphist | 119 | 256 | 375 includes 4 maps purchased. |

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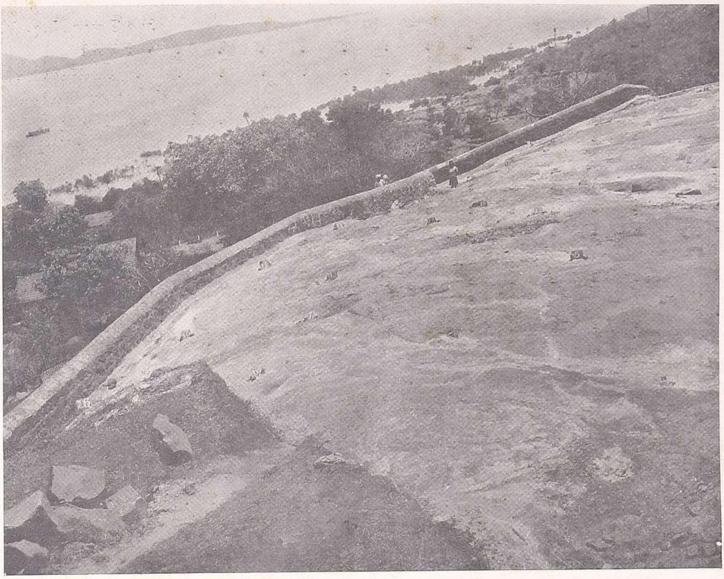
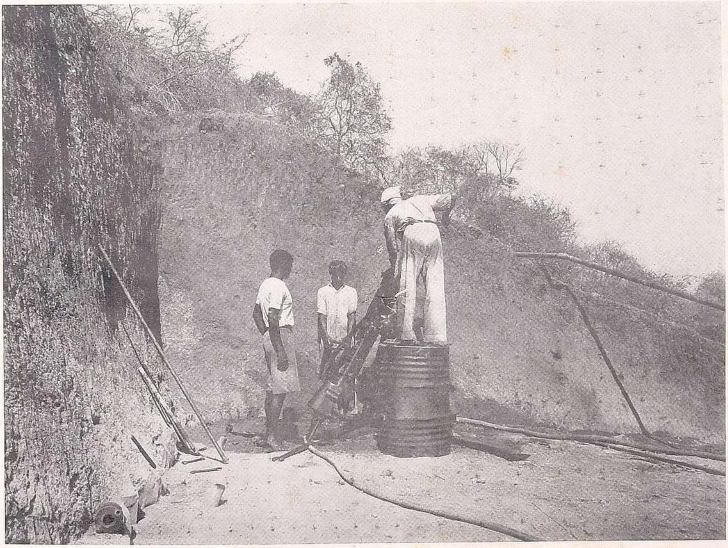
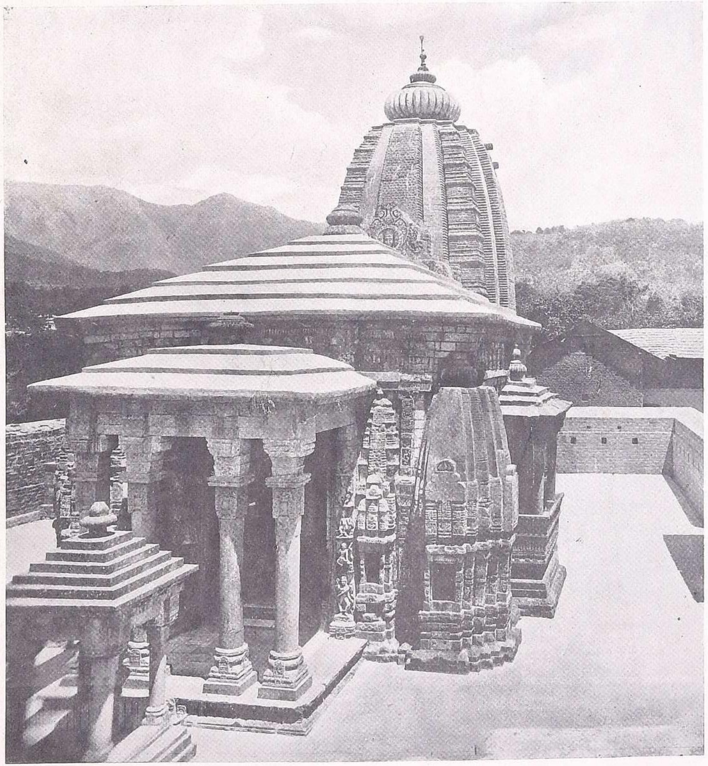


(*a*) Elephanta. Cave No. I. showing barrier holes injected.

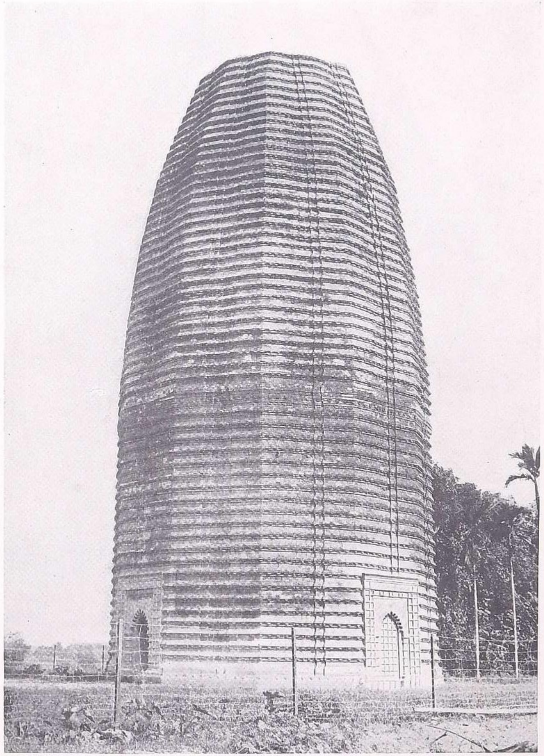


(*b*) Elephanta. Cave No. I. showing grouting operation in progress.

Photo.-Litho. Office, Survey of India.



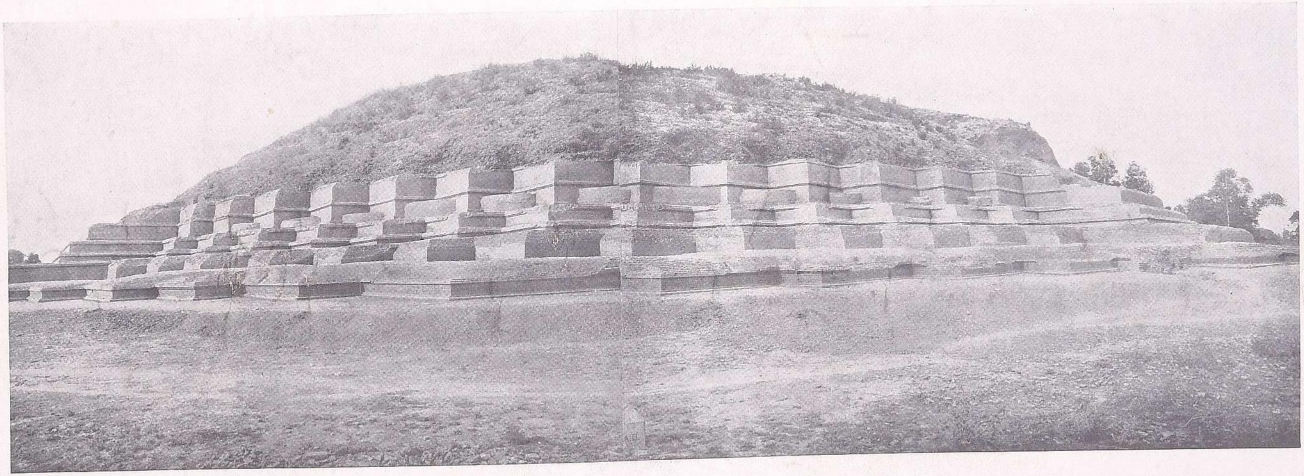
(*a*) Baijnath. District Kangra. Temple after conservation.



(*b*) Mathurapur. District Faridpur. Deul after conservation.

PLATE II

Photo.-Litho. Office, Survey of India.



Lauriya Nandangarh. District Champaran. View of mound after conservation.

PLATE III

Photo.-Litho. Office, Survey of India.